NUS CORPORATION
A Halliburton Company

FIELD INVESTIGATION TEAM ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCES FACILITIES — ZONE I

NUS CORPORATION
SUPERFUND DIVISION

02-8901-16-PA
REV. NO. 0

FINAL DRAFT
PRELIMINARY ASSESSMENT
ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8901-16
CONTRACT NO. 68-01-7346

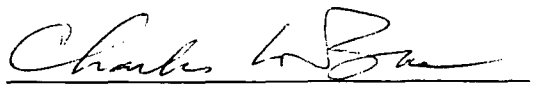
FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

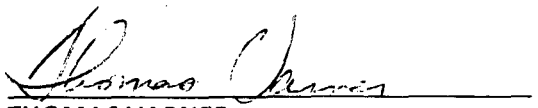
MARCH 29, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:



CHARLES LOBUE
PROJECT MANAGER



THOMAS VARNER
SITE MANAGER

REVIEWED/APPROVED BY:

RONALD M. NAMAN
FIT OFFICE MANAGER

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

PART I: SITE INFORMATION

1. **Site Name/Alias** Aluminum Shapes, Inc.

   Street 9000 River Road

   City Delair **State** New Jersey **Zip** 08110

2. **County** Camden **County Code** 007 **Cong. Dist.** NJ01

3. **EPA ID No.** NJD002338267

4. **Latitude** 39° 59' 15" N **Longitude** 075° 02' 38" W

   USGS Quad. Camden, N.J.

5. **Owner** Aluminum Shapes, Inc. **Tel. No.** (609) 662-5500

   Street 9000 River Road

   City Delair **State** New Jersey **Zip** 08110

6. **Operator** Same as owner **Tel. No.** _____

   Street _____

   City _____ **State** _____ **Zip** _____

7. **Type of Ownership**

   ☒ Private ☐ Federal ☐ State
   ☐ County ☐ Municipal ☐ Unknown

8. **Owner/Operator Notification on File**

   ☐ RCRA 3001 **Date** _____ ☐ CERCLA 103c **Date** _____
   ☐ None ☒ Unknown

9. **Permit Information**

Permit	Permit No.	Date Issued	Expiration Date	Comments
NJ Pollutant Discharge Elimination System (NJPDES)	NJ0034576	9/24/86	10/31/91	Permit to discharge to Pennsauken Sewerage Authority (POTW), to operate a storm water collection system, and to operate a contact cooling water recycling system.

10. **Site Status**

    ☒ Active ☐ Inactive ☐ Unknown

11. **Years of Operation** 4/1/57 to Present

12. Identify the types of waste units (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Management Areas

Waste Unit No.	Waste Unit Type	Facility Name for Unit
1	Surface Impoundment No. 1	Percolation Field
2	Surface Impoundment No. 2	Oil Removal Sump
3	Drum Storage Area	Drum Storage Area

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

An inspection conducted on February 24, 1986 by the New Jersey Department of Environmental Protection (NJDEP)/Division of Water Resources noted the discharge of contaminated storm water from the hydraulic fluid tank dike. This waste may have contained polychlorinated biphenyls (PCBs), heavy metals, and/or petroleum hydrocarbons.

A report written by consultants for Aluminum Shapes, Inc. indicates that retention ponds were used at this facility. These surface impoundments may have received contact cooling water. However, no other referral to these ponds is made in available information.

On February 24, 1986, the NJDEP/Division of Water Resources ordered Aluminum Shapes, Inc. to collect and containerize contaminated soil in the vicinity of the former transformer storage area. The location of this area is not documented in available information, and results of this order are unknown. Soil stained by spilled waste oil was also present at the site for an unknown period of time. On January 4, 1989, the NJDEP/Division of Water Resources directed Aluminum Shapes, Inc. to correct this violation. The location of this area and any corrective actions taken are also undocumented.

Ref. Nos. 1, 2, 3, 4

13. Information available from

Contact Amy Brochu Agency U.S. EPA Tel. No. (201) 906-6802

Preparer Thomas Varner Agency NUS Corp. Region 2 FIT Date March 31, 1989

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 1 - Surface Impoundment No. 1 Percolation Field

1. **Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

   This waste unit was used for an unknown period of time prior to November 18, 1980. RCRA status and permit history are not applicable to this unit.

2. **Describe the location of the waste unit and identify clearly on the site map.**

   The former percolation field was located approximately 125 feet northeast of the eastern corner of the main facility building.

3. **Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

   The percolation field covered an area of approximately 5600 square feet. The type and quantity of hazardous substances deposited in this unit are not clearly documented. However, historical information indicates that it may have received paint line process wastewater. In 1988, plant operations (prepaint processing) produced approximately 8,000 gallons of wastewater per day. If waste was disposed of in the percolation field at this rate for only 1 year, this would correspond to a waste quantity of approximately 2 million gallons, or the equivalent of 40,000 drums.

4. **Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

   This type of waste unit is designed for and suspected of receiving liquid waste.

5. **Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

   The percolation field may have received waste containing solvents (toluene, xylene, acetone), metals (iron, lead, aluminum, chromium), and/or hydrocarbons. Analysis of soil from the percolation field revealed the presence of chromium and total petroleum hydrocarbons. These materials are associated with the etching and spray/wash processes.

6. **Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.**

   The percolation field was unlined. Liquid waste was allowed to evaporate into the atmosphere and percolate into the ground. Surface water is not known to be potentially affected. (Inadequate freeboard is not documented in available information.)

Ref. Nos. 2, 4, 6, 8

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 2 - Surface Impoundment No. 2 Oil Removal Sump

1. **Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

   The oil removal sump is a NJPDES-regulated unit (SO1 discharge) that was used/permitted for an unknown period of time.

2. **Describe the location of the waste unit and identify clearly on the site map.**

   This waste unit was located 50 to 75 feet east of the eastern corner of the main facility building.

3. **Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

   The size of the sump is undocumented in available information.

4. **Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

   This unit received contaminated liquid.

5. **Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

   Permit limits for chromium, bis(2-ethylhexyl)phthalate, butylbenzyl phthalate, petroleum hydrocarbons, and oil and grease were exceeded in the oil removal sump. Liquid entering the sump may have also been contaminated with PCBs.

6. **Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.**

   This unit was a potential source of groundwater contamination. In 1987, consultants for Aluminum Shapes, Inc. proposed that a liner be installed in the sump with the intention of eliminating it as a regulated unit. The fact that a liner was proposed indicates that containment of waste may have been inadequate.

Ref. Nos. 1, 7, 13, 14, 27

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 3 - Drum storage area Drum storage area

1. **Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

   The facility is classified as an Industrial Waste Management Facility (IWMF) and therefore is not regulated under RCRA. The age of this waste unit is unknown.

2. **Describe the location of the waste unit and identify clearly on the site map.**

   The location of the drum storage area is not documented in available information.

3. **Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

   The number of drums present varied, as they were periodically removed. An inspection conducted on June 19, 1987 by the NJDEP/Division of Waste Management noted the presence of 36 drums of wastewater sludge, 11 drums of paint waste, 3 drums of waste oil filters, and 1 drum of spent acetone.

4. **Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

   Sludges, liquids, and solids were stored in drums on site.

5. **Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

   Acetone and conversion coating sludge containing chromium, iron, lead, zinc, xylene, and toluene were present in this waste unit. Waste oil filters were also stored in drums. Waste oils typically contain aromatic and polyaromatic hydrocarbon compounds.

6. **Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.**

   An inspection conducted on June 19, 1987 by the NJDEP/Division of Waste Management noted that the drum storage area was paved and diked along the perimeter. No leaks or spills were noted during this inspection and during an inspection conducted by the U.S. Environmental Protection Agency (EPA) on December 21, 1982.

Ref. Nos. 9, 10

PART III: HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

   There is a strong potential for a release to groundwater. Metals and volatile organic compounds associated with process waste were detected in monitoring wells near the unlined percolation field, which is known to have received process waste.

   Ref. Nos. 1, 4

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

   The aquifer of concern consists of the Potomac Group and the Magothy and Raritan Formations, the last two being undifferentiated because of similar lithology. These three formations, taken as a whole, are considered an aquifer system because of their hydrologic interconnection. This aquifer system consists of three water-bearing layers of sand with some gravel, separated by layers of silt and clay, and contains the most important and productive water-bearing units in Camden and Gloucester Counties.

   The site is located in an outcrop area of the Magothy Formation, which is overlain extensively by highly permeable (and hydraulically connected) Pleistocene sand and gravel. The combined thickness of the Potomac-Magothy-Raritan system ranges from 260 to 1210 feet in Camden County. The depth to the water table is 39 feet, as indicated by data for a monitoring well located at the site. Local and regional groundwater flow is northwest toward the Delaware River. Beneath the site groundwater flows generally southeast. The coefficient of permeability of the water-bearing zones within the aquifer of concern averages 1,000 gallons per day per square foot, or 4.72×10^{-2} cm/sec. The permeability of the overlying water table aquifer is greater than 10^{-3} cm/sec. The Potomac-Magothy-Raritan system is part of a designated sole source aquifer system (New Jersey Coastal Plain Aquifer System).

   Ref. Nos. 1, 16, 17, 18, 19, 20

3. **Is a designated sole source aquifer within 3 miles of the site?**

   The site is located in the outcrop area of the Potomac-Magothy-Raritan aquifer system, part of the New Jersey Coastal Plain Aquifer System.

   Ref. Nos. 16, 19

4. **What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?**

   The lowest point of waste disposal is unknown; a depth of 6 feet can be assumed. The water level in monitoring well No. 1-55 at the site was measured at 39 feet below ground surface on May 15, 1987. The depth from the lowest point of waste disposal to the water table, therefore, is 33 feet.

   Ref. No. 1

5. **What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?**

The aquifer of concern is extensively overlain by highly permeable (greater than 10^{-3} cm/sec) Pleistocene sands. It is unknown whether these deposits exist between the ground surface and the aquifer of concern in the immediate area of the site.

Ref. Nos. 16, 20

6. **What is the net precipitation for the area?**

The net precipitation is 10 inches (44 - 34 = 10).

Ref. No. 20

7. **Identify uses of groundwater within 3 miles of the site (i.e., private drinking source, municipal source, commercial, industrial, irrigation, unusable).**

There are at least 32 public supply wells, 2 domestic supply wells, and 2 industrial-use wells that lie within 3 miles of the site and draw water from the aquifer of concern. See Table 1.

Ref. No. 16

8. **What is the distance to and depth of the nearest well that is currently used for drinking or irrigation purposes?**

Distance 0.35 mi **Depth** 134 ft

Ref. No. 16

9. **Identify the population served by the aquifer of concern within a 3-mile radius of the site.**

The population served by the aquifer of concern within 3 miles of the site is unknown. However, because of the large local population (over 100,000 within 3 miles), the large number of wells (32 public supply wells) within 3 miles of the site that draw from the Potomac-Magothy-Raritan aquifer, and the absence of any other drinking water sources, it is assumed that at least 10,000 people obtain water from the aquifer of concern.

Ref. Nos. 15, 16, 24

SURFACE WATER ROUTE

10. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminants to the facility.**

There is minimal potential for release of contaminants to surface water. No apparent overland migration path that would facilitate the transport of contaminants exists between the site and surface water. However, it is assumed that runoff could travel to the surface water of concern via paved roadway and/or storm sewer.

Ref. No. 17

11. **Identify and locate the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

The nearest downslope surface water is Pennsauken Creek, located approximately 0.50 mile north of Aluminum Shapes, Inc. Pennsauken Creek enters the Delaware River approximately 1.33 miles northwest of the site. Runoff could possibly travel to surface water via paved roadway and/or storm sewer.

Ref. No. 17

12. **What is the facility slope in percent? (Facility slope is measured from the highest point of deposited hazardous waste to the most downhill point of the waste area or to where contamination is detected.)**

The locations of the spill areas are not documented in available information; the facility slope, therefore, cannot be calculated. However, the slope of the Aluminum Shapes, Inc. property is less than 1 percent.

Ref. No. 17

13. **What is the slope of the intervening terrain in percent? (Intervening terrain slope is measured from the most downhill point of the waste area to the probable point of entry to surface water.)**

The locations of the spill areas are not documented in available information; the slope of the intervening terrain, therefore, cannot be calculated. However, the slope of the terrain between the facility property and the surface water of concern is less than 1 percent.

Ref. No. 17

14. **What is the 1-year 24-hour rainfall?**

The 1-year 24-hour rainfall is 2.7 inches.

Ref. No. 20

15. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

The distance to the nearest surface water (Pennsauken Creek) is approximately 0.50 mile.

Ref. No. 17

16. **Identify uses of surface waters within 3 miles downstream of the site (i.e., drinking, irrigation, recreation, commercial, industrial, not used).**

The Delaware River is used for recreational (boating) and industrial purposes. (Pennsauken Creek empties into the Delaware River 1.33 miles northwest of the site.)

Ref. Nos. 17, 24, 25

17. **Describe any wetlands, greater than 5 acres in area, within 2 miles downstream of the site. Include whether it is a freshwater or coastal wetland.**

No wetlands greater than 5 acres in area exist within 2 miles downstream of the site.

Ref. No. 21

18. **Describe any critical habitats of federally listed endangered species within 2 miles of the site along the migration path.**

There are no critical habitats of federally listed endangered species within 2 miles of the site.

Ref. No. 22

19. **What is the distance to the nearest sensitive environment along or contiguous to the migration path (if any exist within 2 miles)?**

Not applicable.

20. **Identify the population served or acres of food crops irrigated by surface water intakes within 3 miles downstream of the site and the distance to the intake(s).**

There are no surface water intakes that supply drinking or irrigation water located within 3 miles downstream of the site.

Ref. Nos. 24, 25

21. **What is the state water quality classification of the water body of concern?**

The Pennsauken Creek is classified as FW2 waters, and the relevant part of the main stem of the Delaware River is classified as Zone 3 waters.

Ref. No. 28

22. **Describe any apparent biota contamination that is attributable to the site.**

There is no apparent biota contamination attributable to the site documented in available information.

AIR ROUTE

23. **Describe the likelihood of a release of contaminant(s) to the air as follows: observed, alleged, potential, none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

There is no potential for a release of contaminants to the air. The percolation field from which waste was allowed to evaporate is no longer used. Drums containing volatile organic compounds are properly stored and periodically removed, and historical information does not indicate that the oil removal sump posed a threat to air quality.

Ref. Nos. 4, 7, 9, 12

24. **What is the population within a 4-mile radius of the site?**

Approximately 310,000 people live within 4 miles of the site.

Ref. No. 15

FIRE AND EXPLOSION

25. **Describe the potential for a fire or explosion to occur with respect to the hazardous substance(s) known or suspected to be present on site. Identify the hazardous substance(s) and the method of storage or containment associated with each.**

There is no known potential for a fire or explosion to occur. Containerized wastes are properly stored and periodically removed from the site.

Ref. Nos. 8, 9, 10, 11

26. What is the population within a 2-mile radius of the hazardous substance(s) at the facility?

Approximately 25,600 people live within 2 miles of the site.

Ref. No. 15

DIRECT CONTACT/ON-SITE EXPOSURE

27. Describe the potential for direct contact with hazardous substance(s) stored in any of the waste units on site or deposited in on-site soils. Identify the hazardous substance(s) and the accessibility of the waste unit.

There is no potential for direct contact with hazardous substances at the site since access is controlled by a fence and a guard house.

Ref. No. 23

28. How many residents live on a property whose boundaries encompass any part of an area contaminated by the site?

None. There are no residential properties near the site that could encompass an area contaminated by the site.

Ref. No. 17

29. What is the population within a 1-mile radius of the site?

Approximately 3,700 people live within 1 mile of the site.

Ref. No. 15

PART IV: SITE SUMMARY AND RECOMMENDATIONS

Aluminum Shapes, Inc. consists of an active, privately owned aluminum extrusion plant and foundry, situated on approximately 20 acres in Delair, Camden County, New Jersey. The site is located in an industrial/residential area near Pennsauken Creek and the Delaware River, and has been in operation since 1957. Approximately 114,000 people live within 3 miles of the site.

Aluminum ingots and scraps are melted in the foundry and formed to produce frames, doors, windows, and other items. Some products are etched and painted before shipping. Hazardous waste is produced during etching and from the cleaning of paint lines and paint spray booths. The paint sludge produced is drummed and disposed of off site; etching waste (containing hexavalent chromium) is pumped to the facility's wastewater treatment plant. Chromium-contaminated sludge produced in the treatment plant is dewatered, drummed, and disposed of off site; the treated water is discharged to the Pennsauken Sewerage Authority under the New Jersey Pollutant Discharge Elimination System (NJPDES), permit No. NJ0034576. Permit limits were exceeded on at least three different occasions in 1987 and 1988 for various parameters, including chromium, aluminum, zinc, oil, and grease.

A percolation field was used by Aluminum Shapes, Inc. for an unknown period of time prior to November 18, 1980. This surface impoundment may have received paint line process waste and allowed the liquid to discharge to the water table. Chromium and petroleum hydrocarbons were found at notable levels in soil collected from the former percolation field. However, there is little chance for direct contact since site access is controlled by a fence and a guard house. Sampling of on-site monitoring wells in 1986 and 1987 revealed the presence of several volatile organic compounds in groundwater, including benzene, chlorobenzene, ethylbenzene, toluene, and trans-1,2-dichloroethene. Groundwater samples collected in 1988 revealed the presence of aluminum, chromium, and several other metals.

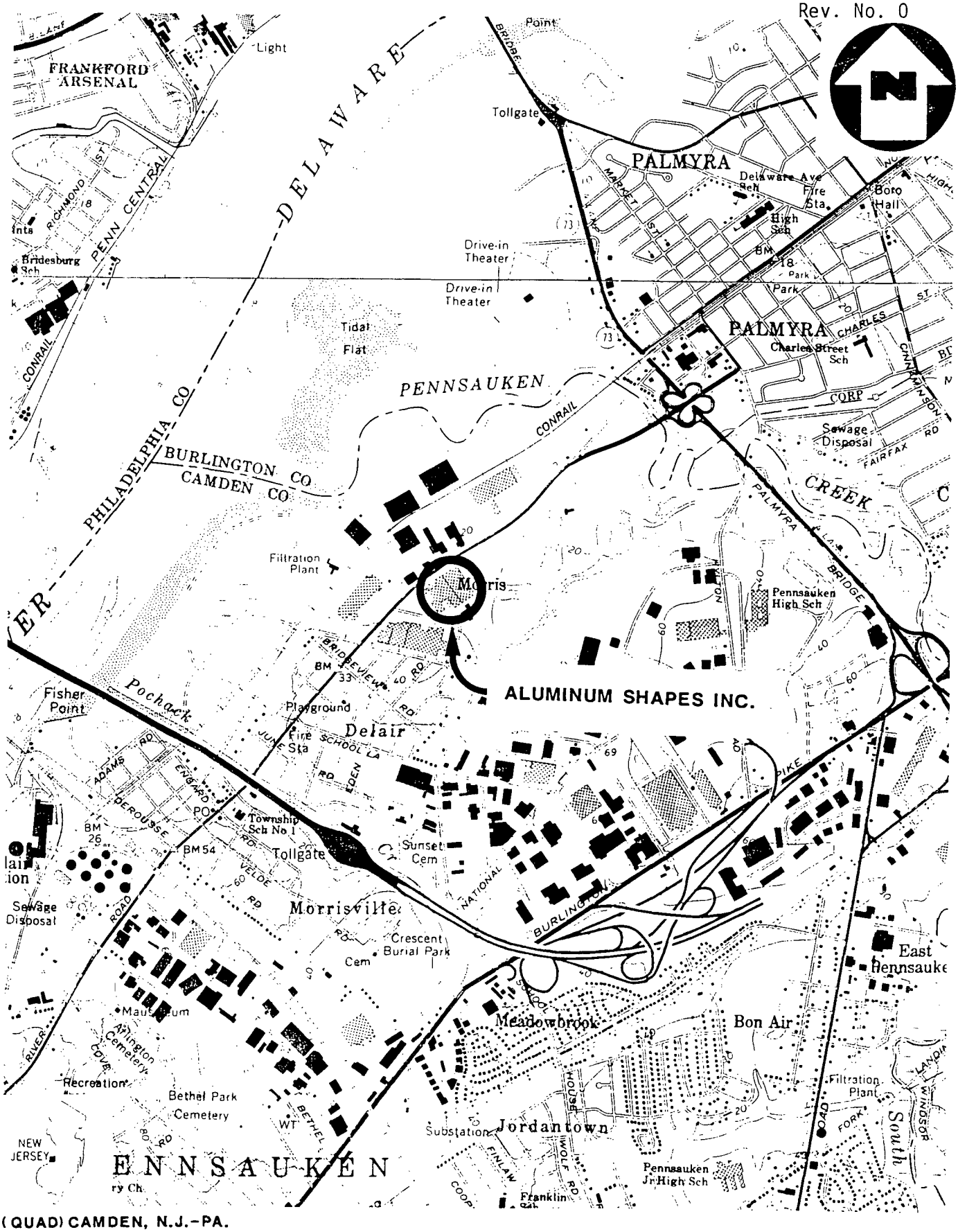
Other waste units present at the site include an oil removal sump, used in the contact cooling water recycling system, and a drum storage area where conversion coating sludge was properly stored and periodically removed. Miscellaneous areas of concern include the former transformer storage area, where stained soil was noted in 1986, and a waste oil spill area, where stained soil was noted in 1988. Aluminum Shapes, Inc. was ordered by the NJDEP/Division of Water Resources on February 26, 1987 to containerize contaminated soil in the former transformer storage area and in the hydraulic fluid tank area. The Division of Water Resources also ordered Aluminum Shapes, Inc. to take corrective action concerning the waste oil spill area. Results of these orders are unknown.

Because of the large number of public supply wells near the site, the documented presence of groundwater contamination, and the importance of the Potomac-Raritan-Magothy aquifer system (part of a designated sole source aquifer), a **HIGH PRIORITY** site inspection is recommended for the site. Sampling of on-site monitoring wells and nearby drinking water supply wells should be conducted in order to determine the extent of groundwater contamination resulting from wastes deposited in the percolation field. Soil samples should be collected at the site to determine the presence or absence of contaminants in this medium. Also, an exact surface water migration route should be delineated through field observations.

Table 1: Wells within 3 Miles of Aluminum Shapes, Inc. That Draw from the Aquifer of Concern

Owner	Location	Number of wells	Use	Depth or range of depths (ft)	Approximate Distance or range of distances from the site (mi)
Camden City Water Dept.	Pennsauken Twp.	19	public supply	107-231	0.35-1.2
Merchantville-Pennsauken Water Commission	Merchantville Boro	1	public supply	285	2.8
	Pennsauken Twp.	12	public supply	123-288	0.71-2.4
H.W. Layer	Pennsauken Twp.	1	domestic supply	137	0.92
B. Christian	Pennsauken Twp.	1	domestic supply	136	1.0
Paragon Oil Co.	Pennsauken Twp.	1	industrial supply	61	1.7
Pennsylvania Railroad	Pennsauken Twp.	1	industrial supply	122	1.2

ATTACHMENT 1



(QUAD) CAMDEN, N.J.-PA.

SITE LOCATION MAP

ALUMINUM SHAPES INC., DELAIR, N.J.

SCALE: 1" = 2000'

FIGURE 1

NUS CORPORATION

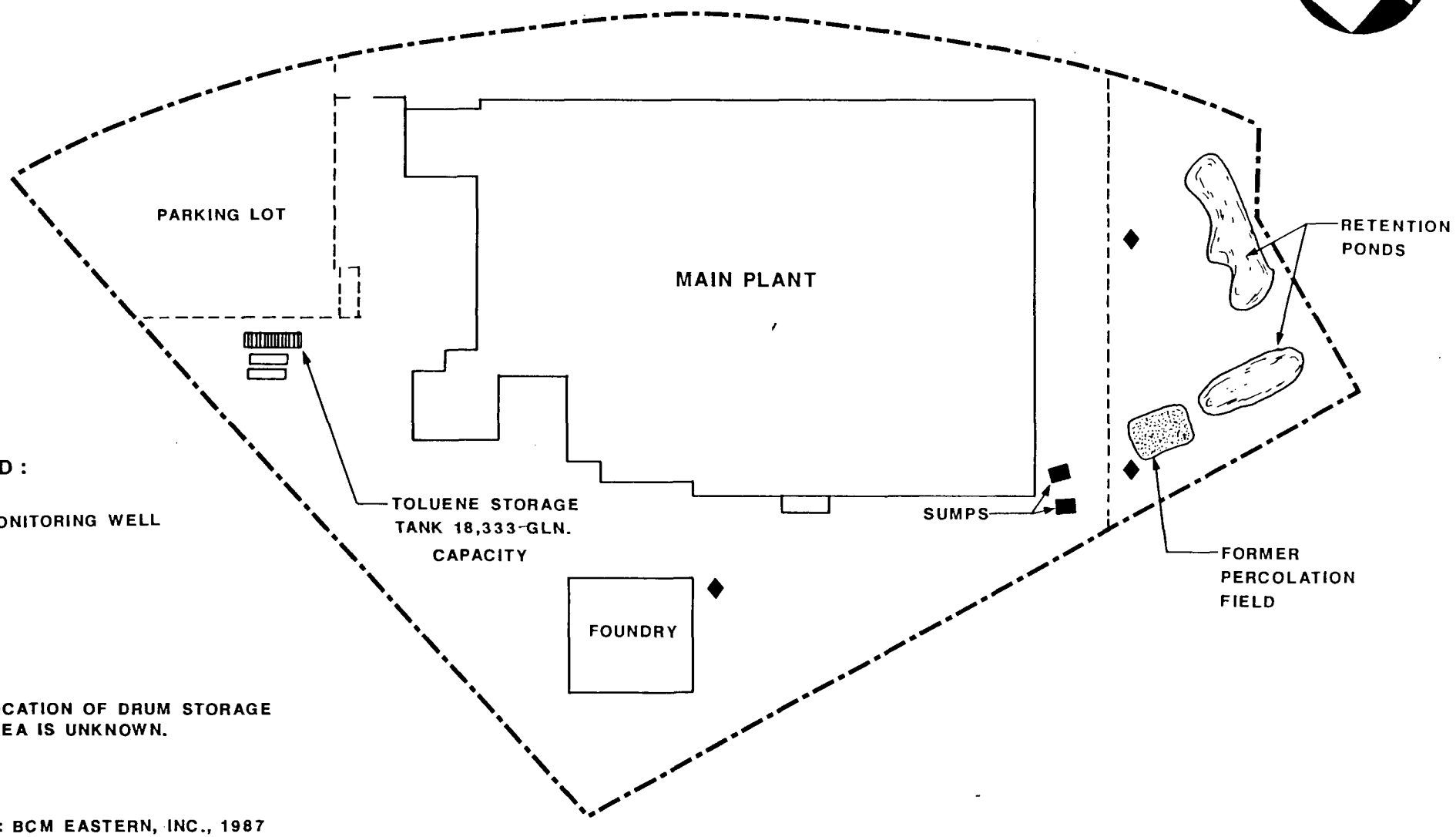


FIGURE 2

SITE MAP

ALUMINUM SHAPES, INC., DELAIR, N.J.

APPROX. SCALE 1"=200'

NUS CORPORATION

02-8901-16
Rev. No. 0

EXHIBIT A

PHOTOGRAPH LOG

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

OFF-SITE RECONNAISSANCE: FEBRUARY 7, 1989

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

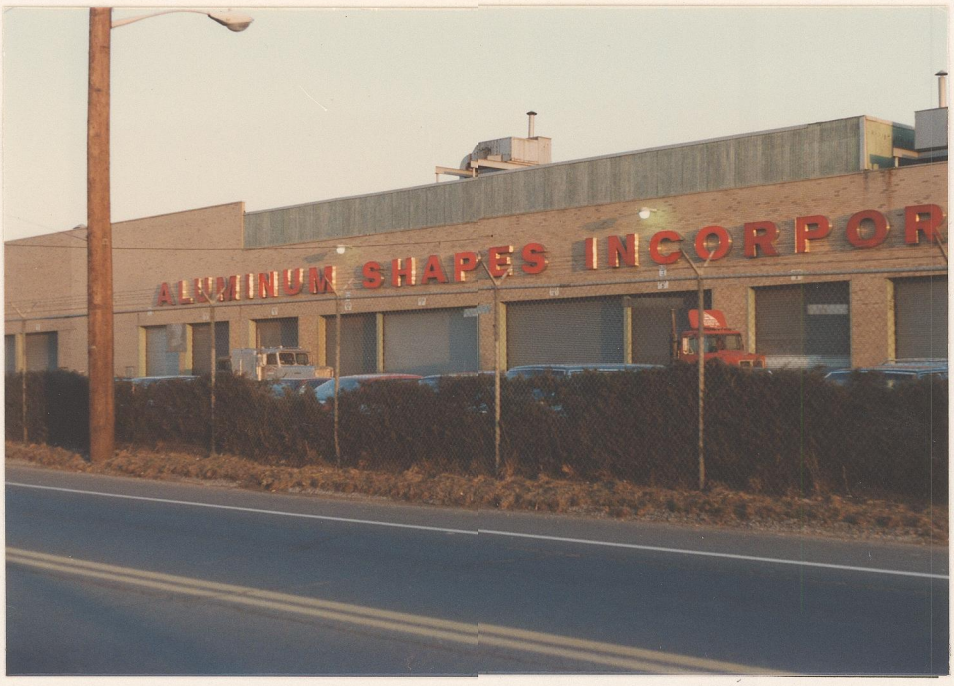
PHOTOGRAPH INDEX

Photo Number	Description	Time
2P-1	Looking southeast at north side of building.	1700
2P-2	Looking northeast at the west side of the building.	1702
2P-3	Looking northeast at south side of building.	1703

All photographs taken by B. Dietz on February 7, 1989.

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

2P-1 February 7, 1989 1700
Looking southeast at the north side of the building.



2P-2 February 7, 1989 1702
Looking northeast at the west side of the building.

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

2P-3 February 7, 1989 1703
Looking northeast at the south side of the building.

ATTACHMENT 2

REFERENCES

1. Letter from Mr. Robert S. Sheneman, BCM Eastern, Inc., to Mr. Steven J. Urbanik, NJDEP/Bureau of Groundwater Quality Management, August 13, 1987.

2. NJDEP/Office of Hazardous Substances Control, Oil and Hazardous Materials Spill Report, completed by Scott A. Santora, January 22, 1979.

3. Letter (Western Union Mailgram) from Mr. James K. Hamilton, NJDEP/Southern Bureau of Regional Enforcement, to John Collings, Aluminum Shapes, Inc. February 26, 1986.

4. Letter from Ms. Jerri Weigand, NJDEP/Southern Bureau of Regional Enforcement, to Mr. Al Willis, Aluminum Shapes, Inc. January 4, 1989.

5. NJDEP memorandum from Mr. Nick Sodano through Ms. Jerri Weigand, both of NJDEP/Southern Bureau of Groundwater Discharge Control, Subject: Aluminum Shapes, Inc. January 13, 1989.

6. NJDEP/Bureau of Hazardous Waste RCRA Generator Inspection Form, November 30, 1981.

7. NJDEP/Bureau of Industrial Waste Management Public Notice. June 6, 1986.

8. Generators Waste Material Profile Sheets, Aluminum Shapes, Inc. February 13, 1985 and November 24, 1986.

9. Inspection Report completed by David Sutton of the NJDEP/Division of Hazardous Waste Management. August 3, 1987.

10. RCRA Inspection Form completed by Ken Gigliello of the Region 2 U.S. EPA. December 21, 1982.

11. Letter from Mr. Bill McDonald, Environmental Consultant for S&W Waste, Inc., to Mr. Kenneth J. Okerson, Aluminum Shapes, Inc. September 16, 1980.

12. New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge Permit No. NJ0034576, issued to Aluminum Shapes, Inc. on September 24, 1986.

13. NJDEP/Division of Water Resources Discharge Surveillance Report, Aluminum Shapes, Inc. December 2, 1986 and May 19, 1987.

14. NJDEP/Division of Water Resources Discharge Surveillance Report, Aluminum Shapes, Inc. December 22, 1987 and January 12, 1988.

15. General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS). Landover, Maryland, 1986.

16. Geology and Ground-Water Resources of Camden County, New Jersey. U.S. Geological Survey Water Resources Investigations 76-76.

17. U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 minute series, "Camden Quadrangle, N.J. - PA.", 1967, photorevised, 1984.

18. Hardt, William F. and George S. Hilton. Water Resources and Geology of Gloucester County, New Jersey. Special Report 30. State of New Jersey Department of Conservation and Economic Development, Division of Water Policy and Supply, 1969.

19. New Jersey Coastal Plain Aquifer System, New Jersey Sole Source Aquifer Final Determination, Federal Register, Vol. 53, No. 122, June 24, 1988.

20. Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.

21. New Jersey Department of Environmental Protection/Bureau of Geology and Topography. Land Use Overlay Sheet Nos. 27 and 31.

22. Letter from Mr. Clifford G. Day, United States Department of the Interior, Fish and Wildlife Service, to Valerie Mathers, NUS Corporation. February 7, 1989.

23. Off-site reconnaissance information reporting form, Aluminum Shapes, Inc., TDD No. 02-8901-16, NUS Corp. Region 2 FIT, Edison, New Jersey, February 7, 1989.

24. Telecon Note: Conversation between Mr. John Rattie, Delaware River Basin Commission, and Tammy Marquart, NUS Corp., February 14, 1989.

25. Telecon Note: Conversation between Mr. John Rattie, Delaware River Basin Commission, and Thomas Varner, NUS Corp., February 15, 1989.

26. Letter from Muhammad N. Shaikh, NJDEP/Bureau of Industrial Discharge Permits, to John F. Collins, Aluminum Shapes, Inc. September 27, 1988.

27. Letter from John M. Tomasiello, NJDEP/Southern Bureau of Regional Enforcement, to Aluminum Shapes, Inc. March 7, 1988.

28. NJDEP/Division of Water Resouces, N.J.A.C. 7.9-4.1 et. seq., Surface Water Quality Standards, May, 1985.

29. Letter from Mr. Edward J. DiMond, BCM Engineers, to Mr. Lewis Klaudi, NJDEP/Southern Bureau of Regional Enforcement. December 27, 1988.

REFERENCE NO. 1

BCM Eastern Inc.
Engineers, Planners and Scientists

The Birches, Suite 4 • 2275 Whitehorse-Mercerville Road • Trenton, NJ 08619 • (609) 587-9777

August 13, 1987

CERTIFIED MAIL

Mr. Steven J. Urbanik
New Jersey Department of Environmental Protection
Bureau of Grounwater Quality Management
401 East State Street
CN 029
Trenton, New Jersey 08625

Subject: Aluminum Shapes, Inc.
Delair, New Jersey
NJPDES Permit No. NJ0034576
BCM Project No. 00-5007-04

Dear Steve:

This letter is in response to your letter to Mr. Donald J. Varner dated April 24, 1987 and provided in Attachment 1. That letter requested water level measurements from the four monitoring wells at the Aluminum Shapes facility as a condition of granting an additional extension of 120 days for installing four additional wells. Table 1 summarizes the water level measurements taken during the period from May 5, 1987 to July 30, 1987. Figures 1 through 4 show water table contour maps based upon groundwater levels from May 5, 1987, June 8, 1987, July 1, 1987, and July 30, 1987 respectively.

The water level measurements and water table contour maps indicate that the groundwater flows generally to the southeast across the site. The monitoring well locations were selected based upon water level data from monitoring wells at the Pennsauken Sanitary Landfill, adjacent to the Aluminum Shapes site. The more site-specific data from the four wells on the site indicate that MW-3-65 is located obliquely downgradient rather than directly downgradient of the sumps.

Table 2 summarizes the organic compounds detected in first three quarterly sampling rounds. These data indicate the presence of volatile organic compounds (VOCs) in the upgradient well (MW-1-55) as well as the downgradient wells (MW-2-55, MW-3-65, and MW-4-60).

Groundwater analytical data from sampling conducted at the Pennsauken Sanitary Landfill on July 22, 1986, obtained by BCM as part of the preliminary site investigation, indicate the presence of VOCs in the groundwater beneath the landfill. These data are provided in Attachment 2.

Based upon review of the data outlined above, Aluminum Shapes proposes the following actions.

1. Install two monitoring wells at the locations shown on Figure 5 to the same specifications as the existing four wells. These wells will provide for more effective monitoring of regulated units as well as provide better definition of upgradient groundwater quality.

2. BCM Eastern Inc. (BCM) will conduct a review of materials handling at the facility. This review will allow comparison of the materials handled by Aluminum Shapes and the compounds deteced in groundwater samples and will also allow for the assessment of the potential groundwater impact from the facility.

3. A liner will be installed in the oil removal sump. This liner will be installed as specified in Part-II-DGW-J of the Aluminum Shapes NJPDES permit. Lining of the sump will eliminate the sump as a possible source of groundwater impact with the intention of eliminating the sump as a NJPDES DGW regulated unit.

Due to the deadline of August 28, 1987 for installation of the additional wells, your timely review of the enclosed data would be greatly appreciated. In addition, representatives of Aluminum Shapes and BCM would like to arrange a meeting to discuss the water level data and proposed actions at the earliest possible convenience.

Should you have any questions or comments, please feel free to contact me.

Very truly yours,

Robert S. Sheneman

Robert S. Sheneman
Geologist

RSS/kk

cc: A. Willis, Aluminum Shapes
A. Robinson, BCM
D. Varner, BCM

TABLE 1

WATER LEVEL MEASUREMENTS AND ELEVATIONS
ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

Date	Well I.D.	Depth to Water (feet)	Casing Elevation (feet)	Water Table Elevation (feet)
5/5/87	MW-1-55	39.86	27.17	-12.69
	MW-2-55	45.41	30.84	-14.57
	MW-3-65	48.43	33.50	-14.93
	MW-4-60	50.87	36.33	-14.54
5/15/87	MW-1-55	38.99	27.17	-11.82
	MW-2-55	44.72	30.84	-13.88
	MW-3-65	47.64	33.50	-14.14
	MW-4-60	49.84	36.33	-13.51
5/21/87	MW-1-55	39.48	27.17	-12.31
	MW-2-55	45.24	30.84	-14.40
	MW-3-65	48.11	33.50	-14.61
	MW-4-60	50.55	36.33	-14.22
5/27/87	MW-1-55	39.50	27.17	-12.33
	MW-2-55	45.19	30.84	-14.35
	MW-3-65	48.07	33.50	-14.57
	MW-4-60	50.52	36.33	-14.19
6/2/87	MW-1-55	39.42	27.17	-12.25
	MW-2-55	45.14	30.84	-14.30
	MW-3-65	48.06	33.50	-14.56
	MW-4-60	50.50	36.33	-14.17
6/8/87	MW-1-55	39.54	27.17	-12.37
	MW-2-55	45.20	30.84	-14.36
	MW-3-65	48.10	33.50	-14.60
	MW-4-60	50.51	36.33	-14.18
6/17/87	MW-1	40.21	27.17	-13.04
	MW-2	45.58	30.84	-14.74
	MW-3	48.77	33.50	-15.27
	MW-4	50.83	36.33	-14.50

Table 1 (continued)

Date	Well I.D.	Depth to Water (feet)	Casing Elevation (feet)	Water Table Elevation (feet)
6/24/87	MW-1	40.09	27.17	-12.92
	MW-2	45.71	30.84	-14.87
	MW-3	49.00	33.50	-15.50
	MW-4	50.99	36.33	-14.66
7/1/87	MW-1	40.19	27.17	-13.02
	MW-2	45.74	30.84	-14.90
	MW-3	49.11	33.50	-15.61
	MW-4	51.02	36.33	-14.69
7/7/87	MW-1	39.98	27.17	-12.81
	MW-2	45.21	30.84	-14.37
	MW-3	48.17	33.50	-14.67
	MW-4	50.93	36.33	-14.60
7/17/87	MW-1	39.53	27.17	-12.36
	MW-2	44.87	30.84	-14.03
	MW-3	48.29	33.50	-14.79
	MW-4	50.78	36.33	-14.45
7/23/87	MW-1	38.57	27.17	-11.40
	MW-2	44.63	30.84	-13.79
	MW-3	47.99	33.50	-14.79
	MW-4	50.33	36.33	-14.00
7/30/87	MW-1	39.75	27.17	-12.58
	MW-2	44.97	30.84	-14.13
	MW-3	48.44	33.50	-14.94
	MW-4	50.58	36.33	-14.25

Measurements made with electric well probe and egineers ruler.

Source: BCM Eastern Inc. (Project No. 00-5007-04)

TABLE 2

SUMMARY OF GROUNDWATER SAMPLING RESULTS
ORGANIC COMPOUNDS

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

Well I.D.	Sampling Date	Compound Detected	Concentration (ug/l)
MW-1-55	12/22/86	Vinyl Chloride	8 J
		trans-1,2-Dichloroethene	24
		Benzene	9 J
	3/2/87	Vinyl Chloride	25
		trans-1,2-Dichloroethene	76
		Benzene	38
		Chlorobenzene	6
	6/8/87	Vinyl Chloride	12
		trans-1,2-Dichloroethene	32
		Benzene	25
MW-2-55	12/22/86	Benzene	25
		Toluene	5 J
		Chlorobenzene	14
		Ethylbenzene	50
		1,4-Dichlorobenzene	11
		bis(2-Ethylhexyl) phthalate	10
	3/2/87	trans-1,2-Dichloroethene	8.2
		Benzene	72
		Chlorobenzene	48
		Ethylbenzene	8.1
		1,4-Dichlorobenzene	17
	6/8/87	trans-1,2-Dichloroethene	11
		Benzene	43
		Chlorobenzene	20
MW-3-65	12/22/86	Benzene	42
		Toluene	5 J
		Chlorobenzene	68
		Ethylbenzene	140
		1,4-Dichlorobenzene	39
		Hexachlorobutadiene	.6 J

Table 3 (continued)

Well I.D.	Sampling Date	Compound Detected	Concentration (ug/l)
	3/2/87	trans-1,2-Dichloroethene	7
		Benzene	55
		Chlorobenzene	29
		Ethylbenzene	18
		1,4-Dichlorobenzene	78
	6/8/87	1,1,2,2-Tetrachloroethene	6.2
		Benzene	28
		Chlorobenzene	22
MW-4-60	12/22/86	trans-1,2-Dichloroethene	52
		bis(2-ethylhexyl)phthalate	7 J
	3/2/87	trans-1,2-Dichloroethene	115
		1,1,2,2-Tetrachloroethene	6.7
	6/8/87	trans-1,2-Dichloroethene	36
		1,1,2,2-Tetrachloroethene	8

J Indicates estimated value.

Source: BCM Eastern Inc. (Project No. 00-5007-04)

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

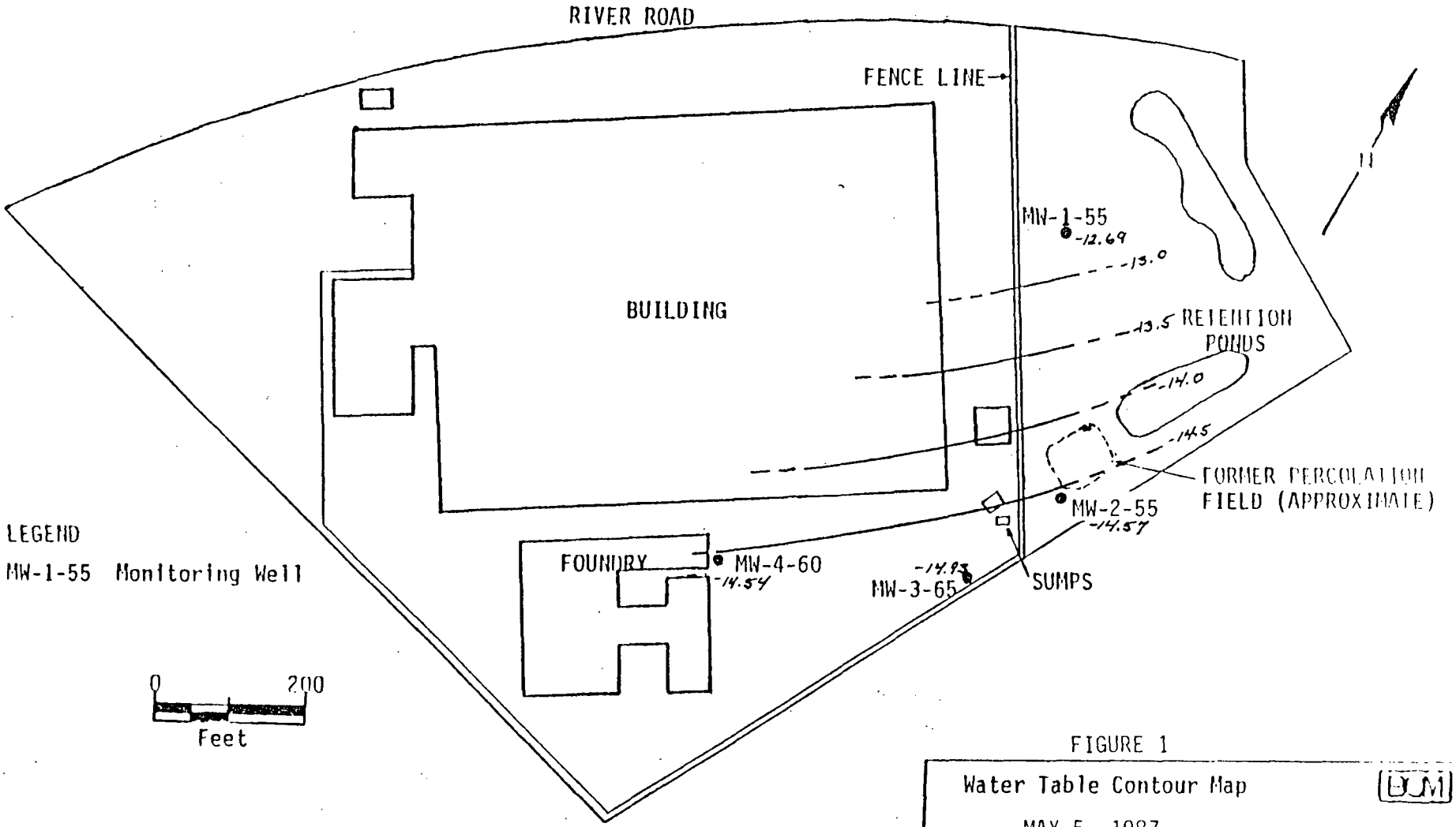


FIGURE 1

Water Table Contour Map

MAY 5, 1987

EJM

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY

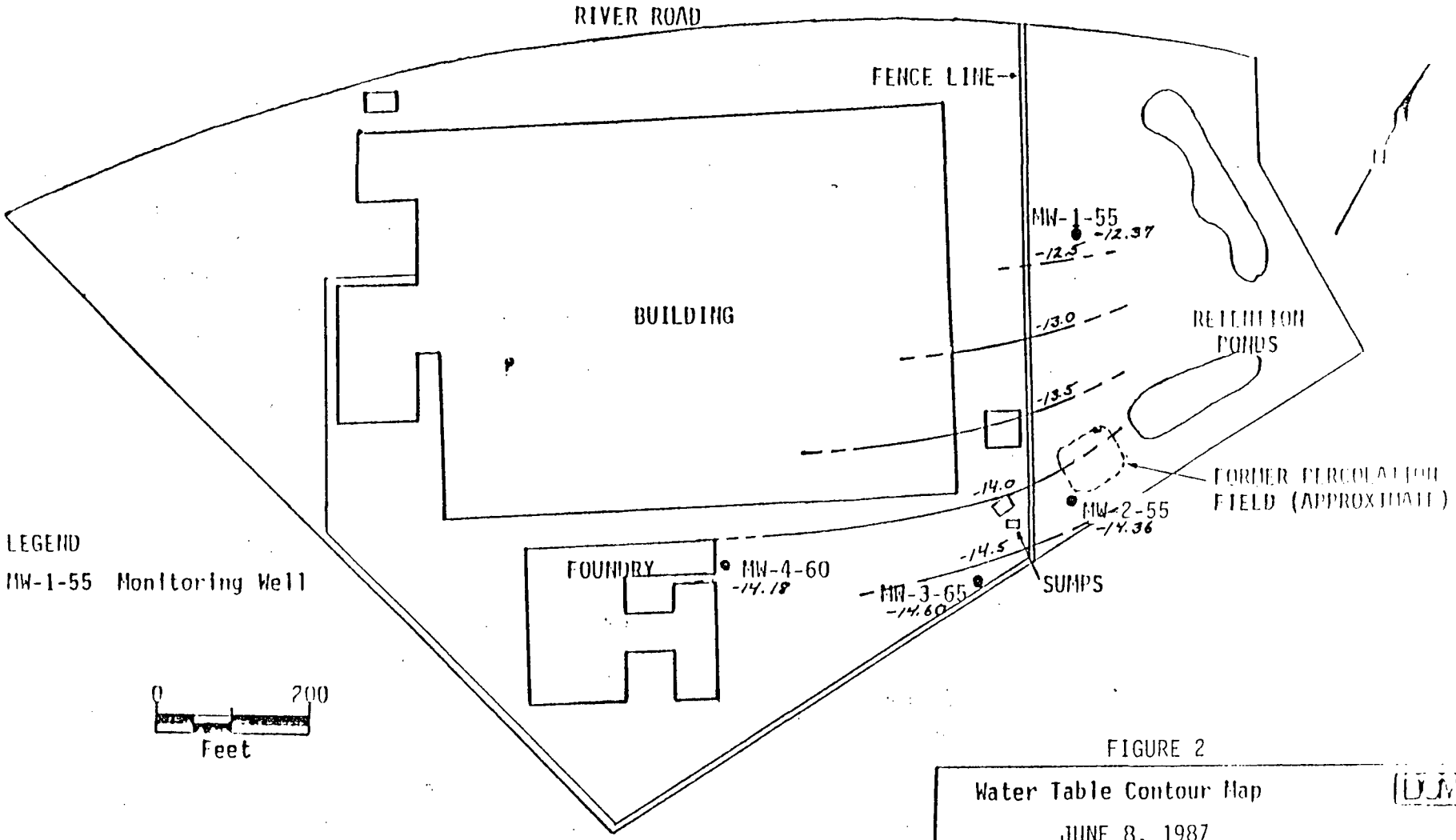


FIGURE 2

Water Table Contour Map

JUNE 8, 1987

[DM]

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY
NJPDES Permit No. NJ0034576

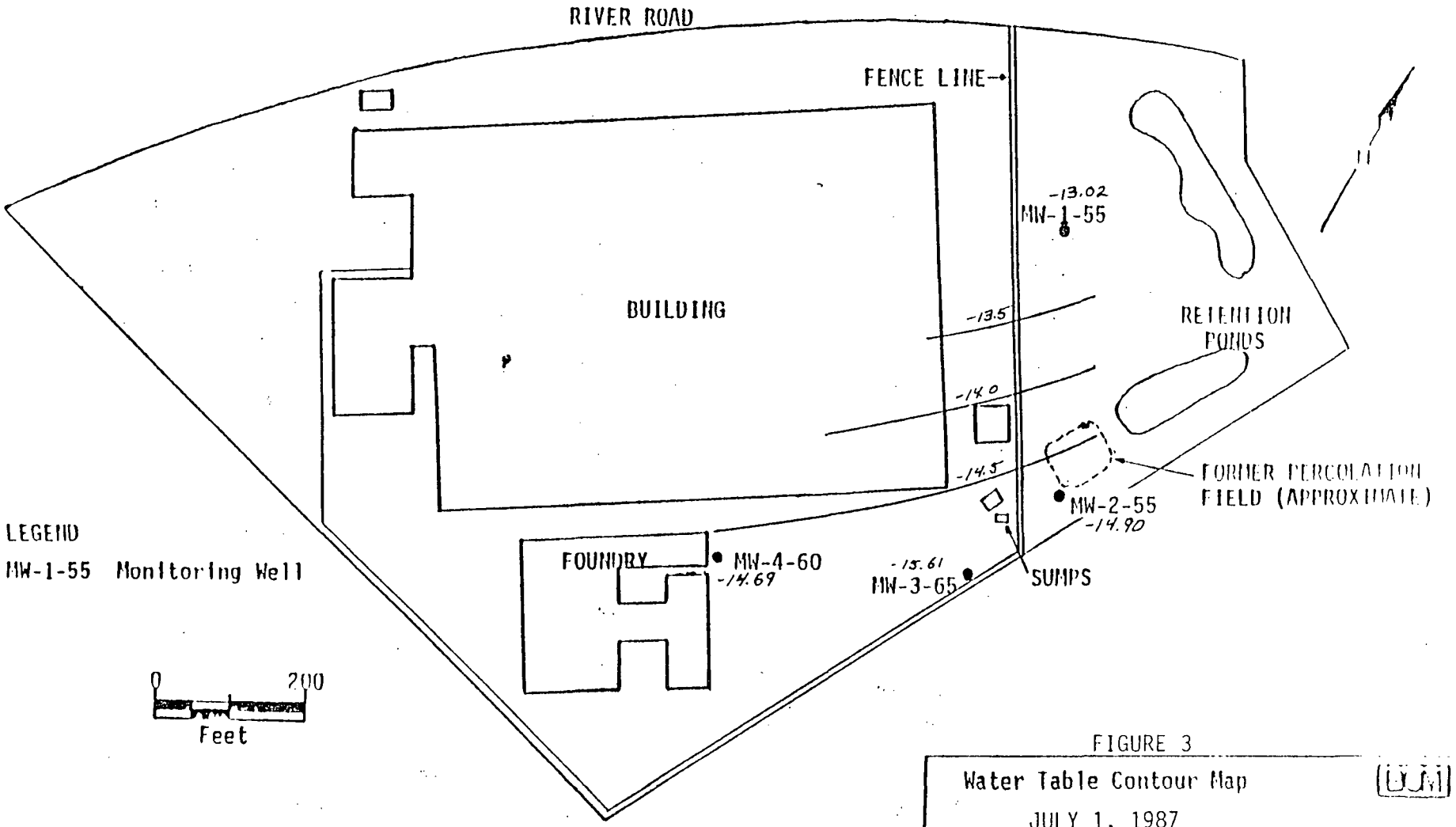


FIGURE 3

Water Table Contour Map

JULY 1, 1987

ALUMINUM SHAPES, INC.
DELAIR, NEW JERSEY
NJPDES Permit No. NJ0034576

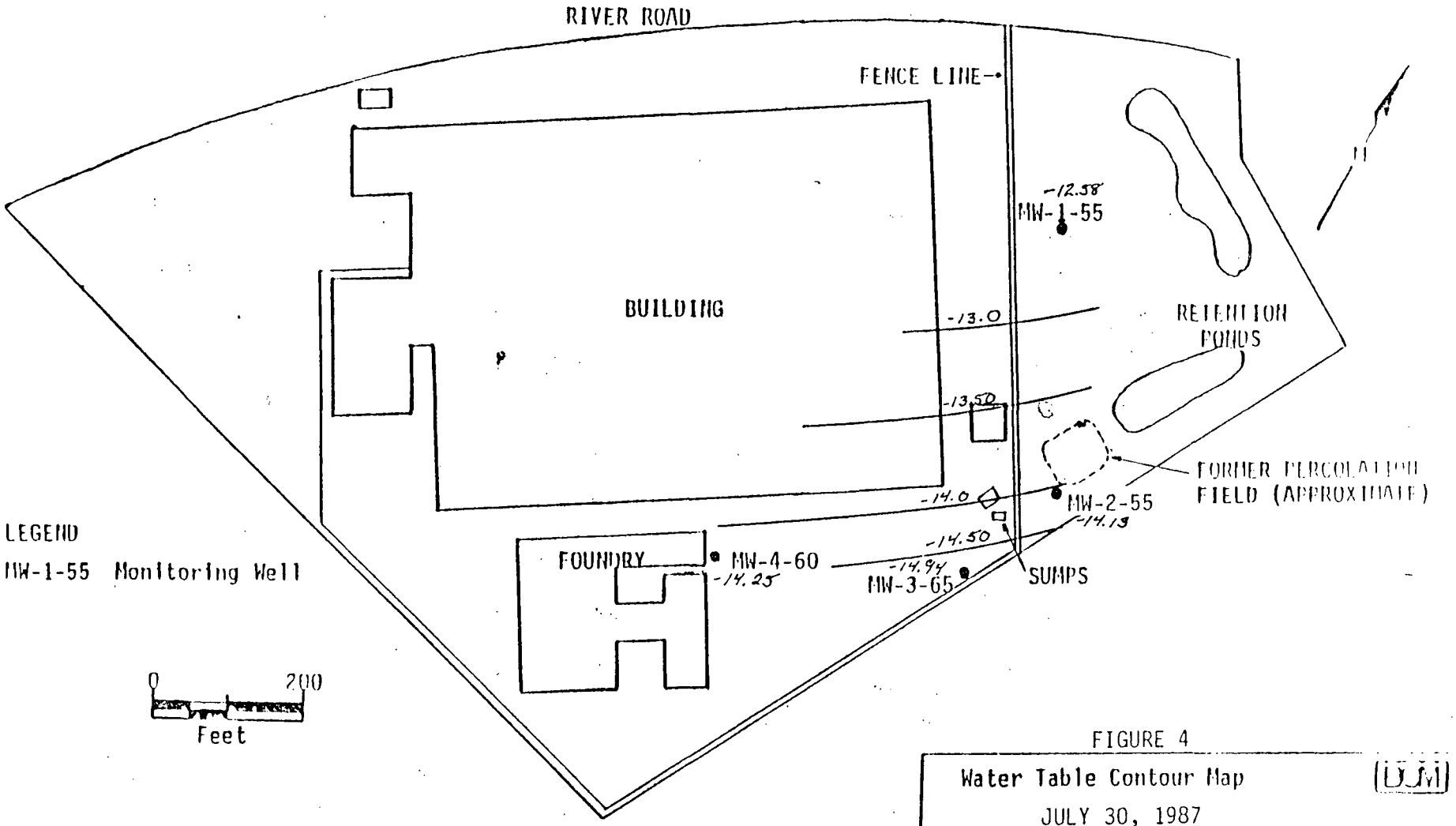


FIGURE 4

Water Table Contour Map

JULY 30, 1987

UJM

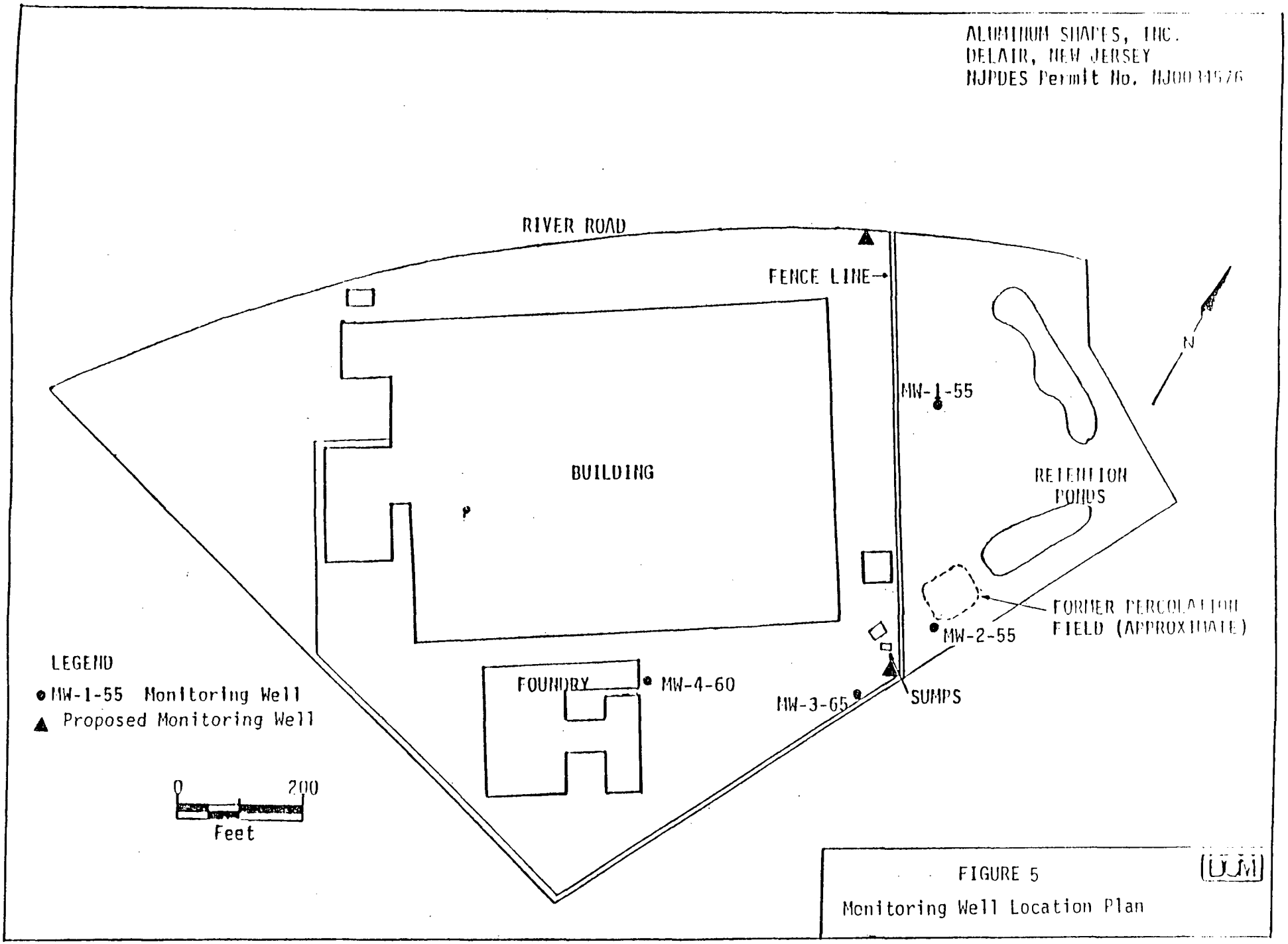


FIGURE 5

Monitoring Well Location Plan

REFERENCE NO. 2

Let's protect our earth

NEW JERS. STATE DEPARTMENT OF ENVIRONMEN.AL PROTECTION
OFFICE OF HAZARDOUS SUBSTANCES CONTROL

OIL AND HAZARDOUS MATERIALS SPILL REPORT

INITIAL REPORT 04-27-10 OHMP CASE NUMBER 80-1-22-5

Date of spill: UNK
Municipality: PENNSAUKEN
Receiving waters: N/A
Tributary to: N/A
Reported by: HOWARD EMERSON
Telephone: 609-757-8600
Address: CAMDEN COUNTY HEALTH
Affiliation: DEPT

Time of spill: UNK
Type of material: POSSIBLY PAINT WASTE
Quantity: UNK
Source: ALUMINUM SHAPES INC.
Location of spill: 9000 RIVER RD (street, road, etc.) PENNSAUKEN, N.J.
Cause: PROCESS DISCHARGE
Date of report: 1/22/79
Time of report: 1020
Report taken by: SCOTT A. SANTORA
Hot Line: _____

Initial Action

AGENCY	TELEPHONE No.	NOTIFIED YES	NOTIFIED NO
Coast Guard/EPA	800 424-8802	☐	☒
Fish & Game	609 292-6685 201 236-2313	☐	☒
Basin Manager	609 292-0566(A) -0686(R) -0576(D) -0604(P)	☒	☐
Dennis Palmer			
Shellfish Notified	609 292-0566	☐	☒

AGENCY	TELEPHONE No.	NOTIFIED YES	NOTIFIED NO
State Police CD/DC	609 882-2000	☐	☒
Solid Waste	609 292-9877	☐	☒
Air Pollution	609 292-6724	☐	☒
Pesticides Control	609 292-5890	☐	☒
Affected Water Supplies _____		☐	☒

Investigation (on scene) (telephone)
Name of investigator:
Date of investigation:
Station:
Time:

Persons contacted:

Name	Affiliation	Telephone
1 Dennis Palmer		-292-0574
2		
3		

Samples: Yes__ No__ Photos: Yes__ No__

Report of investigation and recommended containment and cleanup:

Memo in Spill File ☐

A) - MR EMERSON STATED THAT THE SUBJECT COMPANY IS DISCHARGING A WHITE MATERIAL INTO AN UNLINED LAGOON BEHIND THE COMPANY.

B) - THIS SPILL WAS REFERRED TO THE DELAWARE BASIN.

C) - NO FURTHER ACTION AT THIS TIME.

REFERENCE NO. 3

4-27-10

MAILGRAM SERVICE CENTER
MIDDLETOWN, VA. 22645
26AM

Western Union Mailgram

FEB 27 10 12 AM '86

4-024931S057002 02/26/86 ICS IPMMTZZ CSP TRNC
1 6094260791 MGM TDMT HIGHTSTOWN NJ 02-26 0325P EST

DIVISION OF WATER RESOURCES R LAMBERT
ENFCMNT ELMNT TWIN RIVERS OFC PLZA HWY 33
HIGHTSTOWN NJ 08520

THIS IS A CONFIRMATION COPY OF THE FOLLOWING MESSAGE:

6094260791 CAK TDMT HIGHTSTOWN NJ 304 02-26 0325P EST
FON 6096625500
THE ALUMINUM SHAPES
ATTN, JOHN COLLINS, VICE PRES PRODUCTIONS
9000 RIVER RD
DELAIR NJ 08110

SUBJECT: ALUMINUM SHAPES PENNSAUKEN TOWNSHIP CAMDEN COUNTY

GENTLEMEN,

YOU ARE HEREBY ORDERED TO IMMEDIATELY CEASE THE DISCHARGE OF CONTAMINATED STORMWATER FROM THE HYDRAULIC FLUID TANK DIKE OWNED AND OPERATED BY ALUMINUM SHAPES LOCATED ON RIVER ROAD IN PENNSAUKEN TOWNSHIP. THE DISCHARGE OF CONTAMINANTS ON TO THE GROUND OR INTO SURFACE WATERS OF THE STATE EXCEPT IN CONFORMITY WITH THE NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT IS UNLAWFUL AND IN VIOLATION OF THE NEW JERSEY WATER POLLUTION CONTROL ACTS NJAC 58:10A-6.

ALL SOIL CONTAMINATED BY THE ABOVE ILLEGAL DISCHARGE NOTED BY DEPARTMENT REPRESENTATIVES ON FEBRUARY 24TH, 1986 AND THE CONTAMINATED SOIL IN THE VICINITY OF THE FORMER TRANSFORMER STORAGE AREA SHALL IMMEDIATELY BE COLLECTED AND HELD IN A COVERED CONTAINMENT VESSEL. THIS MATERIAL SHALL BE SEPARATELY SAMPLED AND ANALYZED BY A NEW JERSEY CERTIFIED LABORATORY FOR THE FOLLOWING PARAMETERS:

1. EP TOXICITY FOR HEAVY METALS
2. REACTIVITY
3. PCB'S
4. TOTAL PETROLEUM HYDROCARBONS

THE ANALYSIS SHALL BE SUBMITTED WITHIN 10 DAYS OF RECEIPT OF THIS ORDER TO THIS OFFICE AND TO THE BUREAU OF HAZARDOUS WASTE

Western Union Mailgram®

CLASSIFICATIONS, DIVISION OF WASTE MANAGEMENT FOR CLASSIFICATION. THIS CLASSIFICATION WILL BE UTILIZED TO DETERMINE THE ULTIMATE DISPOSAL SITE.

YOU ARE FURTHER ORDERED TO NOTIFY MS CAROL OSBORN AT 6094260791 DURING WORKING HOURS, OR THE DEPARTMENT ACTION LINE AT 6092927172 DAILY OF THE PROGRESS BEING MADE TO REMOVE ALL CONTAMINANTS FROM THE GROUND ONTO A LOCATION WHICH WILL NOT ALLOW THEM TO SPILL OR WASH INTO GROUND OR SURFACE WATERS OF THE STATE.

FAILURE TO FULLY COMPLY WITH THIS ORDER MAY RESULT IN PROSECUTION UNDER N.J.S.A. 58:10A-10, UNDER WHICH STATUTES YOU COULD HELD LIABLE FOR CIVIL PENALTIES OF UP TO $10,000.00 PER DAY OR A CRIMINAL PENALTY OF UP TO $25,000.00 PER DAY AND OR ONE YEAR IN PRISON.

INSPECTIONS WILL BE MADE TO DETERMINE COMPLIANCE.

VERY TRULY YOURS,
JAMES K HAMILTON, CHIEF
SOUTHERN BUREAU OF REGIONAL ENFORCEMENT

1530 EST

MGMCOMP MGM

5241 (R 7/82)

REFERENCE NO. 4

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
SOUTHERN BUREAU OF REGIONAL ENFORCEMENT
20 EAST CLEMENTON ROAD
THE PAINT WORKS
GIBBSBORO, NEW JERSEY 08026

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

JAN 04 1989

Al Willis
Aluminum Shapes, Incorporated
9000 River Road
Post Office Box 397
Pennsauken, New Jersey 08110

RE: Compliance Evaluation Inspection
Aluminum Shapes, Inc. - SIU/DGW/IWMF
NJPDES No. NJ0034576
Pennsauken Township, Camden County

Dear Mr. Willis:

A Compliance Evaluation Inspection of Aluminum Shapes was conducted by a representative of this Division on December 20 and 21, 1988. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies/violations:

1. A report dated March 1987 from Aluminum Shape's consultant, BCM, states that the soil analyses conducted pursuant to the Permit showed elevated levels of Chrome and Total Petroleum Hydrocarbons in the former percolation field at Aluminum Shapes. In light of the above, the failure of Aluminum Shapes to continue soil sampling is a violation of Part IV - DGW - J,W, Paragraph 1(b) of the Permit's Special Conditions for Aluminum Shapes.

2. Samples taken on September 28, 1988 from groundwater monitoring wells at Aluminum Shapes showed exceedances of the Permit's groundwater standards for pH, Chrome, Manganese and Volatile Organic Compounds.

3. The failure of Aluminum Shapes to submit a compliance monitoring program, as per the September 2, 1987 letter from the Department, is a violation of Part IV - DGW - J,W, Paragraph 2(a) of the Permit's Special Conditions for Aluminum Shapes.

4. Inspection of the aluminum parts cleaning unit at the facility revealed leaks of Chromic acid solution, Hydrofluoric acid solution and a caustic solution from the unit. The leaks drained off the cleaning unit to a concrete pit directly below it and collected into a shallow pond. Measurements of pH from the ponded liquid in the pit revealed that a pH of three exists at one end of the pit while a the same time a pH of eleven exists at the other. This is a violation of the General Condition of the Permit, Paragraphs 5 and 20(2).

5. Groundwater monitor wells numbers 1 to 4 had no permanent identification affixed to them. This is a violation of the General Conditions of the Permit, Paragraph 10.

6. Results of effluent monitoring performed by Aluminum Shapes in September 1988 revealed violations of the Permit's DSN001 effluent limitations for Oil and Grease, Aluminum, Chrome and Zinc.

7. Aluminum Shapes failed to report for PCB 1254 in the DSN001 effluent.

8. Results of effluent monitoring performed by Aluminum Shapes in September 1988 revealed a violation of the Permit's S01 effluent limitation for Oil and Grease.

9. Inspection of the grounds at the facility revealed spills of waste oil. It was noted that the oil was spilled over areas with cracked or jointed concrete and that some oil had been spilled on soils beyond the concrete.

NOTE: The Department recognizes that Aluminum Shapes has implemented measures to mitigate the violations noted in paragraph six (6) above. Therefore, no response to paragraph six (6) is required at this time.

Since the deficiencies/violations cited above are presently, or could, in the future, adversely affect effluent or groundwater quality, Aluminum Shapes is DIRECTED to institute measures to correct the deficiencies/violations. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within fifteen (15) calendar days of the date of this correspondence.

Additionally, Aluminum Shapes is DIRECTED to describe the location at which it samples to satisfy the DSN001 and S01 monitoring requirements, and to describe which parameters are analyzed for each sampling point. Furthermore, in addition to the reporting requirements of the Permit, Aluminum Shapes is DIRECTED to send copies of all future Permit monitoring results to this office.

Both the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.) provide for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Nick Sodano, the Senior Environmental Specialist responsible for this case, who can be reached at (609) 346-8032 or by letter through this Division.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department and/or the U.S. Environmental Protection Agency. Compliance with this Directive shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Very truly yours,

Jerri Weigand, Section Supervisor
Southern Bureau of
Regional Enforcement

cc: Dr. Richard Baker, USEPA Region II
Paul Molinari, USEPA Region II
Camden County Health Department

REFERENCE NO. 5

1/27

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES

GEORGE G. McCANN, P.E.
DIRECTOR

SOUTHERN BUREAU OF REGIONAL ENFORCEMENT
20 EAST CLEMENTON ROAD
THE PAINT WORKS
GIBBSBORO, NEW JERSEY 08026

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

JAN 13 1989

TO: Jeff Fehr, Senior Geologist
Bureau of Groundwater Discharge Control

THROUGH: Jerri Weigand, Section Supervisor
Southern Bureau of Regional Enforcement

FROM: Nick Sodano, Senior Environmental Specialist
Southern Bureau of Regional Enforcement

SUBJECT: Aluminum Shapes Inc.
NJPDES No. NJ0034576 - DGW/SIU/IWMF
Pennsauken Township, Camden County

Attached are copies of the metals analyses from the November 9, 1988 groundwater sampling conducted at Aluminum Shapes Inc. ("ASI"). VO analyses from the same sample date were forwarded to you by memo dated December 30, 1988.

ASI's enforcement history indicates sloppy Chromium and oil waste handling and soils contamination (see 11/30/88 memo to Gary Torres; BGWDC copied). More recently, excursions of the Chromium groundwater standards have been detected in groundwater monitor wells adjacent to ASI but operated and owned by Pennsauken Landfill. Additionally, groundwater contour maps produced by the landfill indicated that ASI was a possible source of the Chromium. However, groundwater contour maps produced by ASI indicated a flow direction approximately 90 degrees different from the landfill maps (see 11/30/88 memo).

The December 20, 1988 inspection of ASI (copy attached) revealed that Chromic and Hydrofluoric acid wastes were spilled to a concrete pit creating a pool (strip test pH of 3). An ASI engineer stated that this condition has existed for approximately nine years. Note that the 11/9/88 data shows both Aluminum and Chromium in the monitor wells sampled.

A meeting is requested to discuss the details of hydrology and other factors affecting this case.

bcc: Division File
Region File through Post/Callahan/Weigand
Sodano

Form DEP-009
10 86

Southern

11-10

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NEW JERSEY 08625

CHAIN OF CUSTODY WITHOUT SHUTTLE

I.D. # _____

JAN 12 1989

NAME OF UNIT AND ADDRESS:

224
10D

SAMPLE NUMBER	Number of Containers	DESCRIPTION OF SAMPLES
46364	2	1 lt for Cr Hex; 1 lt for metals
46366	2	1 lt for Cr Hex; 1 lt for metals
46368	2	1 lt for Cr Hex; 1 lt for metals
46369	1	1 lt for metals

Alum. Shapes
NJ0034576
Pennsauken Twp
Camden Co.

JAN 12 1989

PERSON ASSUMING RESPONSIBILITY FOR SAMPLE: Nick Sodano — TIME 0800 — DATE 11/9/88

SAMPLE NUMBER	RELINQUISHED BY:	RECEIVED BY:	TIME	DATE	REASON FOR CHANGE OF CUSTODY
46364	Nick Sodano	R Harper	8:40	11/9/88	Dof Receiving
46366	Nick Sodano	"	"	11/9/88	"
46368	Nick Sodano	"	"	11/9/88	"
46369	Nick Sodano	"	"	11/9/88	"
46364, 66, 68	S Pedone	[illegible]	1200	11/10/88	Cr Hex
46364, 66, 68, 69	S Pedone	[illegible]	930a	11/17/88	Cu, Cr, Fe, Mn, Ba, Be, Al
46364, 66, 68, 69	R. Harper	[illegible]	9:20	11/28/88	Hg
46364, 66, 68, 69	R. Harper	Mick Sanders	11:10	12/14	Pb
46368	R. Harper	Mick Sanders	11:10	12/14	Cr

REPORT SUBMITTED
DEC 30
NJDOH ENVIRONMENTAL CHEMISTRY LABORATORY

New Jersey State Departme f Health
Public Health and Environmenta. Laboratories
CN 361, Trenton, NJ 08625-0361

AQUEOUS SAMPLE ANALYSIS REQUEST

Lab Sample Number

☒ Routine (9) ☐ Priority (2) ☐ Emergency (1)

SAMPLE INFORMATION

Sampling Point/Station Identification Number: Aluminum Shapes
Sampling Site/Facility/Supply/Location: MW #6 (river rd)
Stream:
Municipality: Pennsauken
County: Camden

Collection Date (MM/DD/YY): 11 07 88
Collection Time (Military): 1320
Field Sample Numbe: 46364 / 46364

Sample Type
- ☐ Stream/Surface
- ☐ Sewage ☐ Raw ☐ Effluent
- ☐ Industrial ☐ Raw ☐ Effluent
- ☒ Ground Water
- ☐ Potable-Raw
- ☐ Potable-Finished
- ☐ Private Well
- ☐ Ocean/Saline
- ☐ Other

Chain of Custody ☒ Yes ☐ No

Data Package ☐ Tier II ☒ Tier I

Retain Sample ☐ Yes ☒ No

AGENCY INFORMATION

Submitting Agency: DWR/SO Enf
Sample Collector: Nick Sodano/Cheryl Boh.
Street Address: Suite 301 S 20 E Clementon Rd
DEP Agency No.: 224
DEP Project Code: IQD
City, State, Zip Code: Gibbsboro NJ 08026

REJECTION OVERRIDDEN AUTHORIZED
Do not release until written notification is received from D.E.P.

Comments:

Field Information

Water Temp °C (P00010)		Stream Flow-CFS (P00061)	
Do-Winkler (P00300)		Gage Height-Ft. (P00065)	
Do-Probe (P00299)		Spec. Cond. @ 25°C (P00095)	CRH exceeded Holding Time
pH (Field) (P00400)		Salinity (P00480)	
Sample Depth Ft. (P00003)		Tide Stage (P70211)	

ANALYSIS REQUESTS

BACTERIOLOGY

Lab. Sample No.
Date Received
- ☐ Fecal Coli (MPN)
- ☐ Tot. Coli (MPN)
- ☐ Fecal Coli (MF)
- ☐ Tot. Coli (MF)
- ☐ Fecal Streptococci (MPN)

DILUTIONS REQUESTED

Fecal Coli / Total Coli	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10
Fecal Strep.	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10

NUTRIENTS

- ☐ NO2-N (NAN02N)
- ☐ NO2 + NO3-N (NAN03N)
- ☐ NH3-N (NANH3N)
- ☐ TKN (NATKN)
- ☐ ORTHO-P (NAOP)
- ☐ TOTAL-P (NATP)

DEMANDS

- ☐ COD (COD)
- ☐ TOC (DATOC)
- ☐ BOD5 (BOD5)
- ☐ CBOD5 (CBOD5)
- ☐ BOD20 (BOD2)
- ☐ CBOD20 (CBOD2)

BOD DILUTIONS REQUESTED

BOD_5			
$CBOD_5$			
BOD_{20}			
$CBOD_{20}$			

RESIDUES

- ☐ Non-Filterable Residue (RASS)
- ☐ Total Residue (RATS)
- ☐ Filterable Residue (RATDS)
- ☐ Non-Filterable Volatile Residue (RAVSS)
- ☐ Total Volatile Residue (RAVTS)
- ☐ Filterable Volatile Residue (RAVDS)
- ☐ Settable Matter (RASM)

GENERAL

- ☐ Color (GAC)
- ☐ Odor (GAO)
- ☐ Turbidity (GAT)
- ☐ PH (GAPH)
- ☐ Alkalinity (GAALK)
- ☐ Acidity (GAACID)
- ☐ Chloride (GACL)
- ☐ MBAS (GAMBAS)
- ☐ Phenols (SSI) (GAPHE)
- ☐ Phenols (PW) (GAPHEX)
- ☐ Hardness (GARHARD)
- ☐ Sulfate (GASO4)
- ☐ Oil & Grease (GAOG)
- ☐ Petroleum Hydrocarbons (GAPHC)
- ☐ Cyanide (GACN)
- ☐ Conductance (GACOND)
- ☐ Dissolved Oxy. (GADO)
- ☐ Fluoride (GAF)
- ☐ Fluoride w/Dist. (GAFD)
- ☐ Silica (GASI)
- ☐ Sulfide (GAS)

METALS

- ☐ Ag (MAAG)
- ☒ Al (MAAL)
- ☐ As (MBAS)
- ☒ Ba (MABA)
- ☒ Be (MABE)
- ☐ Ca (MACA)
- ☐ Cd (MACD)
- ☒ Cr-H (MACRH)
- ☒ Cr-T (MACR)
- ☐ Co (MACO)
- ☒ Cu (MACU)
- ☒ Fe (MAFE)
- ☒ Hg (MAHG)
- ☐ K (MAK)
- ☐ Mg (MAMG)
- ☒ Mn (MAMN)
- ☐ Na (MANA)
- ☐ Ni (MANI)
- ☒ Pb (MAPB)*
- ☐ Sb (MBSB)
- ☐ Se (MBSE)
- ☐ Sn (MBSN)
- ☐ Ti (MBTI)
- ☐ Tl (MBTL)
- ☐ Zn (MAZN)

ORGANICS

- ☐ EPA 601 (VO601)
- ☐ EPA 602 (VO602)
- ☐ EPA 612 (VO612)*
- ☐ EPA 624 (VO624)*
- ☐ EPA 625 (VO625)
- ☐ EPA 625 Base Neut. only (M625B)
- ☐ EPA 625 Acids only (M625A)
- ☐ EPA 503.1 (VO503)*
- ☐ PEST 1 Organochlorines and PCB's*
- ☐ PEST 2 Organophosphates
- ☐ PEST 3 Herbicides
- ☐ PEST 4 Drinking Water
- ☐ PCB's Only

OTHER

- ☐ NOTE: only do
- ☐ Pb if volume
- ☐ allows; otherwise
- ☐
- ☐ delete Pb
- ☐
- ☐ DEC 30
- ☐

*A280 Analysis

NJDEP ENVIRONMENTAL CHEMISTRY LABORATORY

OMM-44
R-87

Distribution: White-Submitting Agency; Canary-Chem. Lab. Central File; Pink-Bacteriology Lab; Gold-Sample Collector

P8912

11-10

NEW JERSEY STATE DEPARTMENT OF HEALTH
PUBLIC HEALTH AND ENVIRONMENTAL LABORATORIES

METAL ANALYSIS RESULTS

Laboratory Sample Number 46364

ANALYSIS	Sample Concentration (ppb)	Minimum Detection Level (ppb)	Method Blank Result (ppb)
Aluminum	3440		
Antimony			
Arsenic			
Barium	86		
Beryllium	5K		
Cadmium			
Calcium			
Chromium, Hexavalent	5K		
Chromium, Total	89		
Cobalt			
Copper	35		
Iron	8600		
Lead	14		
Magnesium			
Manganese	720		
Mercury	0.5		
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Titanium			
Tin			
Zinc			

J Excellent Holding time

REPORT SUBMITTED
DEC 30 1
NJDOH ENVIRONMENTAL CHEMISTRY LABORATORY

Supervisor (Print)	Signature	Date

CHEM-14
MAY 86

DISTRIBUTION:
White - Sub Agency
Canary - Cont. File
Pink - Metals Lab

P8221

New Jersey State Departme f Health
Public Health and Environmenta. Laboratories
CN 361, Trenton, NJ 08625-0361

AQUEOUS SAMPLE ANALYSIS REQUEST

Lab Sample Number 46366

☒ Routine (9) ☐ Priority (2) ☐ Emergency (1)

SAMPLE INFORMATION

Sampling Point/Station Identification Number: Al Shapes
Collection Date (MM/DD/YY): 11-07-88
Collection Time (Military): 1430
Field Sample Number: 46366
Sampling Site/Facility/Supply/Location: MW #3
Stream:
Municipality: Delair Twp
County: Camden

Sample Type
☐ Stream/Surface
☐ Sewage ☐ Raw ☐ Effluent
☐ Industrial ☐ Raw ☐ Effluent
☒ Ground Water
☐ Potable-Raw
☐ Potable-Finished
☐ Private Well
☐ Ocean/Saline
☐ Other

Chain of Custody ☒ Yes ☐ No
Data Package ☐ Tier II ☒ Tier I
Retain Sample ☐ Yes ☒ No

AGENCY INFORMATION

Submitting Agency: NJDEP-DWR-SBRE
Sample Collector: Nick Sodano, C Bokarsik
Street Address: 20 E Clementon Rd, Suite 301S
DEP Agency No.: 224
DEP Project Code: LRD REQUESTED
City, State, Zip Code: Gibbsboro NJ 08026

REJECTION OVERRIDE REQUESTED
Do not release until written notification is received from D.E.P.
CRH—
EHT

Comments:

Field Information

Water Temp °C (P00010)		Stream Flow-CFS (P00061)	
Do-Winkler (P00300)		Gage Height-Ft. (P00065)	
Do-Probe (P00299)		Spec. Cond. @ 25°C (P00095)	
pH (Field) (P00400)		Salinity (P00480)	
Sample Depth Ft. (P00003)		Tide Stage (P70211)	

ANALYSIS REQUESTS

BACTERIOLOGY

Lab. Sample No.:
Date Received:
☐ Fecal Coli (MPN) ☐ Tot. Coli (MPN)
☐ Fecal Coli (MF) ☐ Tot. Coli (MF)
☐ Fecal Streptococci (MPN)

DILUTIONS REQUESTED

Fecal Coli	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10
Total Coli	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10
Fecal Strep.	10	1	-1 10	-2 10	-3 10	-4 10	-5 10	-6 10

NUTRIENTS

☐ N02-N (NAN02N)
☐ N02 + N03-N (NAN03N)
☐ NH3-N (NANH3N)
☐ TKN (NATKN)
☐ ORTHO-P (NAOP)
☐ TOTAL-P (NATP)

DEMANDS

☐ COD (COD)
☐ TOC (DATOC)
☐ BOD5 (BOD5)
☐ CBOD5 (CBOD5)
☐ BOD20 (BOD2)
☐ CBOD20 (CBOD2)

BOD DILUTIONS REQUESTED

BOD_5			
$CBOD_5$			
BOD_{20}			
$CBOD_{20}$			

RESIDUES

☐ Non-Filterable Residue (RASS)
☐ Total Residue (RATS)
☐ Filterable Residue (RATDS)
☐ Non-Filterable Volatile Residue (RAVSS)
☐ Total Volatile Residue (RAVTS)
☐ Filterable Volatile Residue (RAVDS)
☐ Settable Matter (RASM)

GENERAL

☐ Color (GAC)
☐ Odor (GAO)
☐ Turbidity (GAT)
☐ PH (GAPH)
☐ Alkalinity (GAALK)
☐ Acidity (GAACID)
☐ Chloride (GACL)
☐ MBAS (GAMBAS)
☐ Phenols (SSI) (GAPHE)
☐ Phenols (PW) (GAPHEX)
☐ Hardness (GARHARD)
☐ Sulfate (GASO4)
☐ Oil & Grease (GAOG)
☐ Petroleum Hydrocarbons (GAPHC)
☐ Cyanide (GACN)
☐ Conductance (GACOND)
☐ Dissolved Oxy. (GADO)
☐ Fluoride (GAF)
☐ Fluoride w/Dist. (GAFD)
☐ Silica (GASI)
☐ Sulfide (GAS)

METALS

☐ Ag (MAAG)
☒ Al (MAAL)
☐ As (MBAS)
☒ Ba (MABA)
☒ Be (MABE)
☐ Ca (MACA)
☐ Cd (MACD)
☒ Cr-H (MACRH)
☒ Cr-T (MACR)
☐ Co (MACO)
☒ Cu (MACU)
☒ Fe (MAFE)
☒ Hg (MAHG)
☐ K (MAK)
☐ Mg (MAMG)
☒ Mn (MAMN)
☐ Na (MANA)
☐ Ni (MANI)
☒ Pb (MAPB)
☐ Sb (MBSB)
☐ Se (MBSE)
☐ Sn (MBSN)
☐ Ti (MBTI)
☐ Tl (MBTL)
☐ Zn (MAZN)

ORGANICS

☐ EPA 601 (VO601)
☐ EPA 602 (VO602)
☐ EPA 612 (VO612)*
☒ EPA 624 (VO624)* NS
☐ EPA 625 (VO625)
☐ EPA 625 Base Neut. only (M625B)
☐ EPA 625 Acids only (M625A)
☐ EPA 503.1 (VO503)*
☐ PEST 1 Organochlorines and PCB's*
☐ PEST 2 Organophosphates
☐ PEST 3 Herbicides
☐ PEST 4 Drinking Water
☐ PCB's Only

OTHER

☐ Note: Only do Pb, if volume allows, otherwise delete Pb
☐
☐
☐
☐
☐

REPORT SUBMITTED
DEC 30 19..

*A280 Analysis

NJDOH ENVIRONMENTAL CHEMISTRY LABORATORY

EM-44
3-87

Distribution. White-Submitting Agency
Canary-Chem. Lab. Central File
Pink-Bacteriology Lab
Gold-Sample Collector

P8912

NEW JERSEY STATE DEPARTMENT OF HEALTH
[redacted] HEALTH AND ENVIRONMENTAL LABORATORIES

11-10

METAL ANALYSIS RESULTS

Laboratory Sample Number
46369

	Sample Concentration (ppb)	Minimum Detection Level (ppb)	Method Blank Result (ppb)
	883		
	32		
	5K		
	76		
	13		
	519		
	9		
	54		
	0.2K		

REPORT SUBMITTED
DEC 30 [illegible]

	Signature	Date

NJDOH ENVIRONMENTAL CHEMISTRY LABORATORY P8221

DISTRIBUTION:
White - Sub Agency
Canary - Cont. File
Pink - Metals Lab

11-10

NEW JERSEY STATE DEPARTMENT OF HEALTH
PUBLIC HEALTH AND ENVIRONMENTAL LABORATORIES

METAL ANALYSIS RESULTS

Laboratory Sample Number: 46369

ANALYSIS	Sample Concentration (ppb)	Minimum Detection Level (ppb)	Method Blank Result (ppb)
Aluminum	883		
Antimony			
Arsenic			
Barium	32		
Beryllium	5K		
Cadmium			
Calcium			
Chromium, Hexavalent			
Chromium, Total	76		
Cobalt			
Copper	13		
Iron	519		
Lead	9		
Magnesium			
Manganese	54		
Mercury	0.2K		
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Titanium			
Tin			
Zinc			

REPORT SUBMITTED
DEC 30 1

Supervisor (Print)	Signature	Date

CHEM-14
MAY 86

DISTRIBUTION: White - Sub Agency
Canary - Cont. File
Pink - Metals Lab

NJDOH ENVIRONMENTAL CHEMISTRY LABORATORY P8221

REFERENCE NO. 6

RCRA GENERATOR INSPECTION FORM

COMPANY NAME: ALUMINUM SHAPES INC. EPA I.D. NUMBER: NJDCC233826 7

COMPANY ADDRESS:
900 River Rd.
Delair, N.J. 08110

COMPANY CONTACT OR OFFICIAL: John Collins

INSPECTOR'S NAME: Wayne Howitz

TITLE: V.P. Manufacturing
Says it

BRANCH/ORGANIZATION:
N.J.D.E.P.
Bureau of Hazardous Waste

CHECK IF FACILITY IS ALSO A TSD FACILITY ___

DATE OF INSPECTION: 11/30-12/1

	YES	NO	DON'T KNOW
(1) Is there reason to believe that the facility has hazardous waste on site?	X	___	___

a. If yes, what leads you to believe it is hazardous waste? Check appropriate box:

☑ Company admits that its waste is hazardous during the inspection.

☑ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☑ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☑ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☐ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

	YES	NO	DON'T KNOW
- an internal communications or alarm system?	X		
- a telephone or other device to summon emergency assistance from local authorities?	X		
- portable fire equipment?	X		
- adequate aisle space?	X		
- in your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain.	X		

In your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain.

ALL ARE REQUIRED.

*(8) Have you inspected to verify that the groundwater monitoring wells (if any) mentioned in the facility's groundwater monitoring plan (see no. 19 below) are properly installed? N/A

If you have, please comment, as appropriate.

(9) a. Is there any reason to believe that groundwater contamination already exists from this facility? X
If "YES", explain. ALUMINUM SUPPLY OPERATED A SURFACE IMPOUNDMENT PRIOR TO NOV 19, 1980. IT IS POSSIBLE THERE MAY EXIST A GROUND WATER PROBLEM.

b. Do you believe that operation of this facility may affect groundwater quality? NOT ABOVE THE PRESENT WASTE WATER TREATMENT SYSTEM.

c. If "YES", explain.

RECORDS INSPECTION

(10) Has the facility received hazardous waste from an off-site source since Nov. 19, 1980 (effective date of the regulations)? N/A

a. If "YES", does it appear that the facility has a copy of a manifest for each hazardous waste

REFERENCE NO. 7

New Jersey Department of Environmental Protection
Division of Water Resources
Bureau of Industrial Waste Management
CN-029
Trenton, N.J. 08625
(609) 292-4860

JUN 06 1986

PUBLIC NOTICE

Notice is hereby given that the New Jersey Department of Environmental Protection, Division of Water Resources proposes to restrict and control the discharge of pollutants into the Pennsauken Sewerage Authority (PSA), and to ground waters of the State, from:

Aluminum Shapes, Inc.
9000 River Road
Delair, New Jersey 08110

The applicant produces aluminum products by an extrusion process. Scrap and raw aluminum plugs are heated and pressed to desired shapes and then cut. Some parts are also painted on site. Discharge to ground water is from a contact cooling water recycling system. The applicable SIC Code is 3355.

Approximately 262,000 gallons of wastewater daily, including industrial and sanitary wastes, are released to PSA through on outfall, DSN 001. Painting department wastes, approximately 7,720 gallons daily are treated to precipicate chromium.

PSA is under an Administrative Consent Order to cease permit violations due in part to several large industrial dischargers and has instituted a system of user agreements to control these dischargers. The Division intends to include limitations of the user agreement between PSA and Aluminum Shapes as well as Federal and State Regulations to limit this discharge.

Some cooling water is recirculated through an oil/water seperator, holding pits and cooling towers. Discharge from these holding pits may reach ground water, and this potential discharge is restricted and controlled as required by N.J.A.C. 7:14A-1 et seq.

Operation of the cooling towers requires an Air Quality permit.

This notice is being given to inform the public that NJDEP has prepared a draft NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM (NJPDES) permit (NJPDES Permit No. NJ0034576) in accordance with the "Regulations Concerning the New Jersey Pollutant Discharge Elimination System" (N.J.A.C. 7:14A-1 et seq.), which were promulgated pursuant to the authority of the New Jersey "Water Pollution Control Act" (N.J.S.A. 58:10A-1 et seq.).

This is an existing facility, and issuance of a NJPDES permit is the enforcement mechanism by which pollutant discharges are brought into compliance with standards. The draft permit contains these conditions necessary to restrict the discharge of pollutants and protect the public health and environment.

The draft document prepared by NJDEP is based on the administrative record which is on file at the offices of the NJDEP, Division of Water Resources, located at 1474 Prospect Street in the Township of Ewing, Mercer County, New Jersey. It is available for inspection, by appointment, between 8:30 a.m. and 4:00 p.m., Monday through Friday. Appointments for inspection of the file may be scheduled by calling (609) 633-6620. Copies of the draft permit may be obtained for a nominal charge by contacting the Department.

Interested persons may submit written comments on the draft document to the Administrator, Water Quality Management, at the address cited above. All comments must be submitted within 30 days of the date of this public notice. All persons, including applicants, who believe that any condition of this draft document is inappropriate or that the Department's tentative decision to issue this draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period. All comments submitted by interested persons in response to this notice, within the time limit, will be considered by the NJDEP with respect to the permit. At the close of the public comment period, the Department will issue or deny the permit. The Department will respond to all significant and timely comments when a final decision is issued. The applicant and each person who has submitted written comments will receive notice of NJDEP's final decision.

Any interested person may request in writing that NJDEP hold a non-adversarial public hearing on the draft document. This request shall state the nature of the issues to be raised in the proposed hearing as detailed above, and shall be submitted within 30 days of the date of this public notice to the Administrator, Water Quality Management, at the address cited above. A public hearing will be conducted whenever the NJDEP determines that there is a significant degree of public interest. If a public hearing is held, the public comment period in this notice shall automatically be extended to the close of the public hearing.

Additional information concerning the draft permit may be obtained between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday from: Gary Torres at (609) 292-4860 (regarding discharge to PSA) or Stephen J. Urbanik at (609) 292-0424 (regarding groundwater discharge).

Arnold Schiffman
Administrator
Water Quality Management

REFERENCE NO. 8

No LDR Nec. Est. Stream

S & W WASTE, INC.

115 JACOBUS AVE. • KEARNY, N.J. 07032 • (201) 344-4004

GENERATORS WASTE MATERIAL PROFILE SHEET

APPR CODE 003

TECHNICIAL REP. INITIALS GTN

A. GENERAL INFORMATION

GENERATOR NAME Aluminum Shapes Inc GENERATOR EPA I.D. NO.

AND ADDRESS 1000 River Rd Dover NJ

TECHNICIAL CONTACT Ken Brown TITLE Mgr Tech. PHONE 609 662 5500

WASTE NAME Dust Sludge

PROCESS GENERATING WASTE Dust Collector

B. PHYSICAL CHARACTERISTICS OF WASTE

PHYSICAL STATE @ 70°F
☐ SOLID ☐ LIQUID
☒ SEMI-SOLID ☐ POWDER
% LIQUID

ODOR Solvent
COLOR Gray

☒ ORGANIC
☐ INORGANIC
☐ CHLORINATED ORGANIC

BTU VALUE PER LB.
% CL % S
BS&W

LAYERS
☐ MULTI LAYERED
☐ BI-LAYERED
☒ SINGLE PHASED

TOC
COD
% SOLIDS

pH: ☐ 0-2 ☐ 2.1-4 ☐ 4.1-6.9 ☒ 7 ☐ 7.1-10 ☐ 10.1-12.5 ☐ <12.5 ☐ EXACT ☐ N/A

SPECIFIC GRAVITY: ☐ < .8 ☐ .8-.9 ☐ .9-.95 ☐ .95-1.0 ☐ 1.0-1.1 ☐ 1.1-1.24 ☒ 1.25-1.4 ☐ 1.5-1.7 ☐ > 1.7 ☐ EXACT

FLASH POINT (°F): ☐ < 100 ☒ 100-140 ☐ 140-200 ☐ > 200 ☐ EXACT

C. CHEMICAL COMPOSITION (MUST TOTAL 100%)

	%
Resin	43
Pigment	31
Solvent	26

D. METALS ☐ TOTAL ☐ EP TOX

Ag		Hg	
As		Ni	
Ba		Pb	
Cd		Se	
Cr		Zn	
Cu		Te	
OTHER			

E. OTHER COMPONENTS

☐ PCB'S*
☐ PESTICIDES/HERBICIDES*
☐ CYANIDE OR CYANIDE PRODUCING
☐ SULFIDE OR SULFIDE PRODUCING
☐ PHENOLICS
☐ RADIOACTIVE
☐ INFECTIOUS
☐ OTHER

* ATTACHED DISCLAIMERS MUST BE SIGNED

F. HAZARDOUS CHARACTERISTICS:

TOXICITY RATINGS
____ INHALATION
____ DERMAL
____ ORAL
☐ EXPLOSIVE ☐ PYROPHORIC
☐ WATER REACTIVE ☐ SHOCK SENSITIVE
☐ MSDS ATTACHED

NFPA RATING

G. MANIFEST INFORMATION

PROPER DOT SHIPPING NAME Waste Flammable Solid NOS
DOT HAZARD CLASS ~~4.1~~ Flammable Solid
UN/NA NO. 1325
EPA/STATE WASTE TYPE D001
EPA/STATE HAZARD CODE I

H. SHIPPING INFORMATION

☐ BULK LIQUID ~~☒ BULK SOLID~~ ☒ DRUMS ☐ OTHER
SHIPPING FREQUENCY: QUANTITY 20 PER MO

I. SPECIAL HANDLING INFORMATION/COMMENTS:

Stabilized Sludge
MSDS update For
Record Purposes

I HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED ABOVE AND ALL ATTACHMENTS ARE COMPLETE AND ACCURATE, AND THAT ALL SAMPLES SUBMITTED ARE REPRESENTATIVE OF THE WASTE.

DATE 2/13/95 TITLE GENERAL SIGNATURE

Overall Composition

Resin Solids	43%
Pigments	31%
Solvents	26%

Resin Solids Composition

Acrylic Copolymer	85%
Epoxy	5%
Melamine-Formaldehyde	10%

Pigment Composition

Titanium Dioxide	Predominant component
Talc	Major
Silica	Major
Iron	Less than 1%
Chromium	Less than 1%
Lead	Less than 1%
Zinc	Less than 0.1%

Solvent Composition

Xylene	2.2%
Diacetone Alcohol	0.5%
Toluene	0.4%
Butyl Carbitol	3.4%
Aromatic Naphtha	1.2%
Water	1.0%
Complex Hydrocarbon Mixture (probably naphthas)	91.3%

LSR 7139

AP[illegible]OVAL CC 000650-908

[illegible]W WA[illegible]TE, INC.

• SOUTH KEARNY, N.J. 07032 • (201) 344-4004

TECHNICIAL REP. INITIALS GTN

[illegible]S WASTE MATERIAL PROFILE SHEET

[illegible] INFORMATION

[illegible]AME Aluminum Shapes Inc — GENERATOR EPA I.D. NO. NJD 002335267

9000 River Rd — Delran NJ 08110

CONTACT Ken Okerson — TITLE ____ — PHONE 609 662 5500

Acetone

GENERATING WASTE Paint Line

[illegible]YSICAL CHARACTERISTICS OF WASTE

[illegible]AL STATE @ 70°F	ODOR		BTU VALUE PER GAL.	LAYERS	
[illegible] ☒ LIQUID	Acetone	☒ ORGANIC	10000 +	☐ MULTI LAYERED	TOC ____
[illegible]I-SOLID ☐ POWDER		☐ INORGANIC	% CL ____ % S ____	☐ BI-LAYERED	COD ____
[illegible]UID ____	COLOR: Br	☐ CHLORINATED ORGANIC	BS&W ____	☒ SINGLE PHASED	% SOLIDS ____
[illegible]O ____			% ASH ____		

[illegible]	SPECIFIC GRAVITY	FLASH POINT (°F)	VISCOSITY (Centipoise)
☐ 0-2 ☐ 7.1-10 ☐ N/A	☐ <.8 ☐ 1.1-1.24	☐ FLASH ☐ <90	☐ 1-100
☐ 2.1-4 ☐ 10.1-12.5	☐ .8-.9 ☐ 1.25-1.4	☐ POINT ☒ <100	☐ 100-1000
☒ 4.1-6.9 ☐ >12.5	☒ .9-.95 ☐ 1.5-1.7	☐ (°F) ☐ 100-140	☐ 1000-10000
☐ 7 ☐ EXACT ____	☐ .95-1.0 ☐ >1.7	☐ CC ☐ 140-200	☐ >10,000
	☐ 1.0-1.1 ☐ EXACT ____	☐ OC ☐ <200	☐ EXACT ____
		☐ EXACT ____	

C. CHEMICAL COMPOSITION (MUST TOTAL 100%)

	%
Acetone	99
Paint	1

D. METALS ☐ TOTAL ☐ EP TOX

Ag	____	Hg	____
As	____	Ni	____
Ba	____	Pb	____
Cd	____	Se	____
Cr	____	Zn	____
Cu	____	Te	____
OTHER	____		

E. OTHER COMPONENTS

- ☐ PCB'S*
- ☐ PESTICIDES/HERBICIDES*
- ☒ CYANIDE OR CYANIDE PRODUCING
- ☒ SULFIDE OR SULFIDE PRODUCING
- ☐ PHENOLICS
- ☐ RADIOACTIVE
- ☐ INFECTIOUS
- ☐ ELEMENTAL METALS*
- ☐ OTHER

*ATTACHED DISCLAIMERS MUST BE SIGNED

F. HAZARDOUS CHARACTERISTICS:

TOXICITY RATINGS — NFPA RATING

____ INHALATION
____ DERMAL
____ ORAL

☐ EXPLOSIVE ☐ PYROPHORIC
☐ WATER REACTIVE ☐ SHOCK SENSITIVE
☐ MSDS ATTACHED

G. MANIFEST INFORMATION

PROPER DOT SHIPPING NAME Waste Acetone

DOT HAZARD CLASS Flammable liquid

UN/NA NO. UN 1090

EPA/STATE WASTE TYPE F003

EPA/STATE HAZARD CODE I

H. SHIPPING INFORMATION

☐ BULK LIQUID ☐ BULK SOLID ☒ DRUMS ☐ OTHER ____

SHIPPING FREQUENCY: QUANTITY 6 PER QTR

I. SPECIAL HANDLING INFORMATION/COMMENTS:

H&C ok 11/18/86

US

1-4 on solvent

[illegible]

J.

I HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED ABOVE AND ALL ATTACHMENTS ARE COMPLETE AND ACCURATE, AND THAT ALL SAMPLES SUBMITTED ARE REPRESENTATIVE OF THE WASTE.

DATE 10/24/86 — TITLE Manager Purchasing — GENERATOR'S SIGNATURE [signature]

REFERENCE NO. 9

Form DWM-029
3/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

4-27-16

INSPECTION REPORT

REPORT PREPARED FOR:

- [x] Generator
- [ ] Transporter
- [ ] HWM (TSD) Facility

FACILITY INFORMATION

Name: Aluminum Shapes

Address: 9000 River Road P.O. Box 397
Delair, NJ 08110

Lot: 1A Block: 250

County: Camden

Phone: 609-662-5500

EPA ID#: NJD 002 338 267

Date of Inspection: 6/19/87

PARTICIPATING PERSONNEL

State or EPA Personnel: David Sutton

Facility Personnel: Howard Evans - Safety Director
Howard Coogan - Foreman

Report Prepared by Name: David Sutton

Region: NJDEP - DHWM - BFO - SFO

Telephone#: 609-346-8000

Reviewed by: Terry Ostrander

Date of Review: 8/3/87

SUMMARY OF FINDINGS

FACILITY DESCRIPTION AND OPERATIONS

Aluminum Shapes, Inc. manufactures various aluminum frames, doors, windows and shapes for numerous applications. The facility employs 800 people and is operated 24 hours per day using a three shift system. The facility has been at this location for approximately 30 years and has added and expanded different building and operations since that time.

Aluminum ingots as raw materials as well as some aluminum scrap metals are melted and combined in an on-site foundry. The metal is then extruded using various presses depending on the desired product into different lengths and shapes.

Some of the product items are placed on a conveyor paint line where they are first etched with an ethant solution and then painted the desired color. Those items that are not painted are shipped after the extrusion process takes place.

Hazardous waste is generated from the painting process as well as lubricating oils. The facility was classified as an IWMF on 2/27/87 (see letter) and was issued a NJPDES permit # NJ0034576 on 11/1/86 for the on-site waste water treatment plant (WWTP) The WWTP accepts the wastewater from the paint process as well as other facility generated wastewater. A 7500 gallon tank is used for chemical treatment

Subject: Aluminum Shapes, Inc. Date: 6/19/87

whereby incoming wastewater with hexavalent chromium is reduced to trivalent chromium. This involves an initial pH adjustment and then after the reduction occurs the pH is readjusted. Settling of the sludge portion takes place in the tank which is recirculated through the WWTP system. Sludge that cannot be recirculated is dewatered in a filter press. The dewatered sludge is drummed as a hazardous waste D007. The treated wastewater is discharged to the municipal sewer via the NJPDES permit.

Describe the activities that result in the generation of hazardous waste.

1) Wastewater treatment dewatered sludge from the paint wastewater coating process. (D007)
2) Oil filters from the on-site waste oil recycling reclamation mobile unit (Petrotech, Inc.) (X91C)
3) Paint sludge residue including off-spec paints. (D001)
4) Fiberglas spa shell manufacturing process. (F003) spent acetone

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

D007 - 36, 55 gallon drums - dewatered sludge
X91C - 3, " " - waste oil filters
D001 - 11, " " - paint sludge waste
F003 - 1 " " - acetone

SHORT TERM ACCUMULATION STANDARDS (FOR GENERATORS WHO ACCUMULATE WASTE IN CONTAINERS FOR 90 DAYS OR LESS)

		YES	NO	N/A
7:26-9.4	Containers - Storage area non asphalt paving diked around perimeter.			
	What type of containers are used for storage. Describe the size, type and quantity and nature of waste (e.g., 12 fifty five gallon drums of waste acetone). - 55 gallon drums - 36 drums wastewater sludge - D007 11 paint waste drums - D001 3 waste oil filter drums - X726 1 drum acetone sent - F003			
7:26-9.4(d)1i	Do the containers appear to be in good condition, not in danger of leaking?	✓		
	If no, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.			
7:26-9.4(d)4i	Are all containers securely closed except those in use?	✓		
7:26-9.4(d)4iii	Do containers appear to be properly handled or stored in a manner which will minimize the risk of the container rupturing or leaking?	✓		
7:26-9.4(d)4iv	Are containerized hazardous waste segregated in storage by waste type?	✓		
7:26-9.4(d)4v	Is every container arranged so that its identification label is visible?	✓		
7:26-9.4(d)5	Is the storage area inspected at least daily?	✓		
7:26-9.4(d)6	Are containers holding ignitible and reactive wastes located at least 50 feet (15 meters) from the facility's property line?	✓		
7:26-11.2	Tanks			
7:26-12.1(a)	Does the generator store hazardous waste in tanks?		✓	
	If yes, what are the approximate number and size of tanks containing hazardous waste?			
	Identify the waste treated/stored in each tank.			

REFERENCE NO. 10

SM-3

RCRA INSPECTION FORM

Report Prepared for:

Generator [X]

Transporter [ ]

TSD facility [ ]

Copy of report requested by facility [X]

Facility Information

Name: Aluminum Shapes, Inc.

Address: River Road
Delair, New Jersey 08110

EPA ID#: NJD 002338267

Date of Inspection: December 21, 1982

Participating Personnel

State or EPA Personnel: Ken Gigliello, Environmental Scientist
KareN Egnot, Environmental Scientist

Facility Personnel: Jim Collins, Plant Manager
Howard Goonan, Foreman

Report Prepared by Name: Ken Gigliello

Agency: U.S.E.P.A., Region II

Telephone #: 201-321-6695

Approved for the Director by: [signature] 1/20/83

Summary of Findings

Facility Description and Operations

Aluminum Shapes, Inc. located in Delair, New Jersey manufactures various aluminum windows, doors, frames and shapes. The facility employs 400 persons operating twenty-four hours a day, five days a week. The facility has been operating at this location since 1957.

Raw material enters the facility as pure aluminum ingots. The ingots are melted, along with scrap aluminum, in a foundry on-site to form a round billet. The aluminum billet is then used as the mold for the aluminum extrusion. After the aluminum is extruded it is stretched, cut to length and heat treated in an aging oven. At this point the aluminum piece is either: 1) shipped, 2) machined prior to shipment, 3) painted and machined prior to shipment. The painted aluminum is preceded by a conversion coat to prepare the metal for painting.

All hazardous waste generated ~~is~~ originates on the paint line. Paint sludge (80% paint, 20% toluene) is generated by cleaning paint li

and cable to the paint spray booths. Wastewater from the conversion coating operation is pumped to a 750 gallon tank for treatment. Treatment includes chemical addition to reduce hexavalent chromium to trivalent chromium, settling and pH adjustment. Overflow from the chemical addition tank and settling tank is sent to the city sewer. Sludge from the settling tank is dewatered in a filter press. The dewatered sludge is classified a RCRA hazardous waste.

In 1991, the facility disposed of 162,000 pounds of conversion coating sludge and 125,000 pounds of paint sludge.

Describe the activities that result in the generation of hazardous waste.

1. Wastewater treatment sludge from the operation of filtering of aluminum. (Solid)
2. Paint sludge from cleaning of paint lines and spray booths. (Semi-solid)

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

- D007 - Wastewater Treatment Sludge
  28 - 55 GALLON DRUMS

- F005 - Spent solvent and paint sludge
  ONE DRUM

MANIFESTS:

TRANSPORTER } S+W Waste Inc
TSD } 53 Pennsylvania Avenue
Fourth Kearny, New Jersey

Summary, Conclusions and Recommendations

The facility is a generator of hazardous waste only as stated by facility personnel. The facility notified EPA by letter on July 29, 1982 that due to the exclusion listed in §265.1(c)(1 the TSD regulations of Part 265 did not apply. Based upon the observations noted during the inspection, the facility meets the limitations of this exclusion.

The following requirements of the regulations were not being complied with by the facility:

- 262.34 No accumulation date on five drums. No "Hazardous Waste" labels on twenty-nine (29) drums.
- 265.16 No personnel training records
- 265.32 Inadequate aisle space to inspect individual drums for labels and accumulation date.
  *SEE PAGE 5
- 265 (Subpart D) No written contingency plan.

REFERENCE NO. 11

3.00
70.00

S. & W. Waste, Inc.
53 PENNSYLVANIA AVENUE
SOUTH KEARNY, N. J. 07032
Tel. 344-4004

September 16, 1980

Mr. Kenneth J. Okerson
Aluminum Shapes, Inc.
9000 River Road
Delair, New Jersey

Dear Mr. Okerson,

Enclosed please find the information that you have requested concerning our waste treatment facility. S.& W. Waste is licensed by the State of New Jersey under the supervision of the Department of Environmental Protection. Our transfer and storage permit number is 6907A. When S.& W. ships waste material to an approved licensed disposal facility, we become the generator. Our permit number as a generator is 10610. Also, our hauler number is S-3002.

All incoming waste material is worked immediately to prepare it for safe shipment to a disposal facility. Strict quality control guarantees the correct packaging of waste material under the regulations issued by the Department of Transportation. It should also be stated that our facility is inspected at least once a week by Department of Environmental Protection officials. If you have any questions, please call me at (201) 344-4004.

Sincerely,

Bill McDonald

Bill McDonald
Environmental Consultant

S. & W. Waste, Inc.
53 PENNSYLVANIA AVENUE
SOUTH KEARNY, N. J. 07032
Tel. 344-4004

- LICENSED FACILITY: S.& W. Waste Inc. has been a licensed N.J. state transfer facility since the beginning of the N.J. hazardous waste manifest system, under the supervision of the Department of Environmental Protection.

- PROPER HANDLING: All incoming waste materials are placed in accordance to the categories listed on the manifest. The various chemicals are blended, dried and generally prepared for shipment to approved disposal facilities. When shipped, S.& W. becomes the generator.

- SAFETY IN HANDLING: There has not been one fatality or injury at S.& W. since it began operations.

- RESEARCH AND CONSULTING SERVICE: S.& W. has a staff chemist on call at all times to professionally evaluate waste material that enters our facility.

- IMMEDIATE DISPOSAL: All incoming waste material is worked immediately to reduce its volume and inspected for total identification so that disposal can be quickly and safely accomplished. Quality control procedures guarantee secure shipment from our facility to disposal sites under the regulations of the Department of Transportation and the Department of Environmental Protection.

REFERENCE NO. 12

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CN 029
Trenton, N.J. 08625

PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachment accompanying same application, and applicable laws and regulations. This permit is also subject to the further condition and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Permit No.	Issuance Date	Effective Date	Expiration Date
NJ0034576	September 24, 1986	November 1, 1986	October 31, 1991

Name and Address of Applicant	Location of Activity/Facility	Name and Address of Owner
Aluminum Shapes, Inc. 9000 River Road Delair, NJ 08110	9000 River Road Delair, Pennsauken Township Camden County, NJ	SAME AS APPLICANT

Issuing Division	Type of Permit	Statute(s)	Application No.
WATER RESOURCES	NJPDES/SIU and DGW and IWMF	N.J.S.A. 58:10A-1 et seq.	NJ0034576

This permit grants permission to:

Discharge industrial wastewater into the Pennsauken Sewerage Authority, to operate a stormwater collection system and to operate a contact cooling water recycling system, in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and IV hereof.

Approved by the Department of Environmental Protection
By the Authority of:
George G. McCann, P.E.
Acting Director
Division of Water Resources

ARNOLD SCHIFFMAN, ADMINISTRATOR
WATER QUALITY MANAGEMENT

SEP 24 1986
DATE

The word permit means "approval, certification, registration, etc."

(GENERAL CONDITIONS ARE ON THE REVERSE SIDE.)

REFERENCE NO. 13

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ 0039853 NO. OF DISCHARGES 001 CLASS MAJ-SIU

DISCHARGER Pennsauken Facility SIU/IWMF/DGW

OWNER Aluminum Shapes, Inc.

MUNICIPALITY Pennsauken COUNTY Camden WATERSHED CODE 2Del

LOCATION 900 River Road

RECEIVING WATERS PSA STP STREAM CLASS NA

LICENSED OPERATOR & PLANT CLASS None N-2

TRAINEE/ASSISTANT _____ OTHER INFO. _____

DEFICIENCIES OR COMMENTS/ 1. Chrome Total was exceeded in 001 discharge on p 2 part III L of the permit
2. Oil and Grease, Petroleum Hydrocarbon were exceeded in 001 discharge (can implant wastestream) on p 1 part III DGW
3. All four monitoring wells exceeded the permit limits for Manganese and Oil and grease on p 1 part III DGW
This permit has two numbers. Number listed above is the correct number 4. Licensed Operators being interviewed
NO unpermitted discharges observed or reported by Mr A. Willis during inspection

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR J.J. Ricciardi TITLE CEI

INFORMATION FURNISHED BY (Name) Al Willis

(Title) PLANT ENGINEER (Organization) ALUMINUM SHAPES

DATE OF INSPECTION 12/2/86 5/14/87

N.J.D.E.P.
D.W.R.
DISCHARGE SURVEILLANCE REPORT

Permit #: 0053955
Date: 12/2/86

INDUSTRIAL TREATMENT PROCESS EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	DISCHARGE #	CC1	---	
	WASTEWATER SOURCE(S)		---	SANITARY, CONTACT/NON COOLING, STORMWATER
	CONTINUITY OF OPERATION		---	6 DAYS 24 HOURS
	BYPASSES/OVERFLOWS		S	none
	S.P.C.C. PLAN		—	EPA TO DETERMINE BASED ON PHYSICAL LOCATION OF FACILITY
	ALARM SYSTEMS		S	HIGH LEVEL. LOCAL SOUND/LIGHT
	ALTERNATE POWER SUPPLY		N/A	NO POWER NO PRODUCTION
TREATMENT PROCESSES				ALUMINUM MANUFACTURING
	EXTRUSION MACHINES		S	CONTACT COOLING, HYDRAULIC OIL
	OIL WATER SEPARATOR		S	COLLECTS STORMWATER & HYDRAULIC OIL
	SUMP		S	OIL WATER SEPARATOR DISCHARGE TO STORAGE TANK
	INFLUENT SUMP		S	SPRAY WASH BOOTH S (2 RINSES 2 ETCHES)
	BATCH TREATMENT TANKS 2		S	STEEL TANK ENCLOSED ABOVE THE FLOOR
	REAGENT TANK		S	STEEL TANK ABOVE THE FLOOR
SLUDGE HANDLING	FILTER PRESS		S	CAKE IS DRUMMED FOR DISPOSAL
	HOLDING TANK		2	FIBERGLASS ABOVE THE FLOOR
	DISPOSAL SITE		S	SOW KEARNEY - CHEM WASTE, FT WAYNE INDIANA
OTHER INFORMATION	FLOW METER & RECORDER		S	AT DISCHARGE TO PSA CALIBRATED OTRLY APR 87
	RECORDS		S	AT PLANT SITE
	SAMPLING PROCEDURES		S	AS PER PERMIT
	ANALYSES PERFORMED BY		S	BCM LABS #77175
	FINAL EFFLUENT APPEARENCE		S	CLEAR
	REC. WATERS APPEARENCE		N/A	

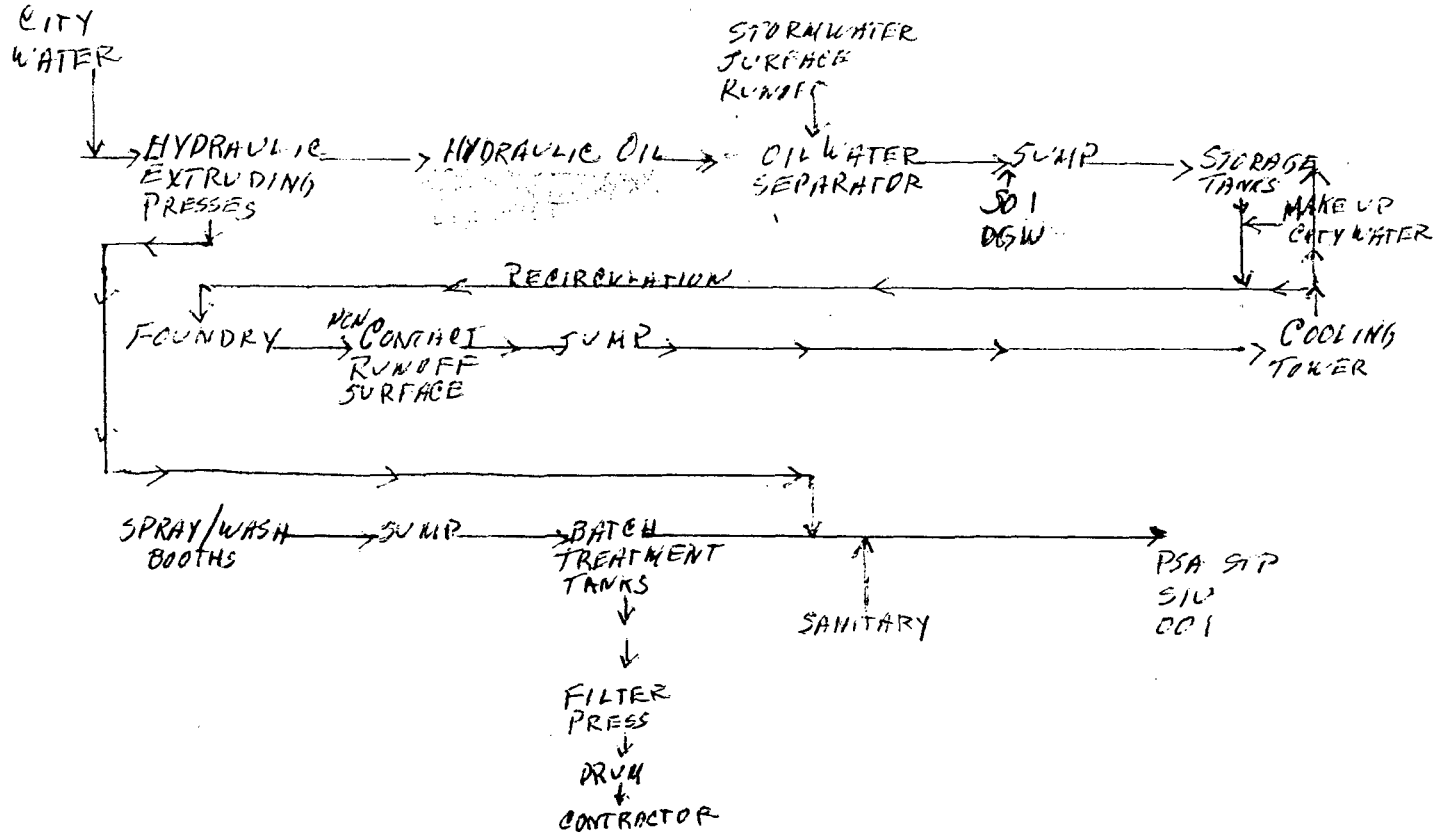
Form DWR-053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

Permit # 0053953
Date 12/2/86

DISCHARGE SURVEILLANCE REPORT

PLANT DIAGRAM AND FLOW SEQUENCE:



DISCHARGE DATA

SOURCE: MRF QRTRLY PERIOD: 12/86 thru 04/87

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
001	FLOW	CONT	0.3 MGD	.238/.404	001	ALUM	CP	10 mg/l	1.5/5.25
"	COD	GR	400 mg/l	70/103		Ba	CP	1.2 mg/l	.069
"	BOD	GR	250 mg/l	26.5/45		Zn	CP	1.48 mg/l	.102/.126
"	TSS	GR	300 mg/l	1.305/18		Cu	GR	.295 mg/l	.005
	O&G	MULTI GR	100 mg/l	3.05/4.0		TTO	GR	.701 mg/l	.110
	C,T	CP	.445 mg/l	.133/.740		TEMP	GR	65° C	
	C,H	CP	.1 mg/l	.006/.010		PH	GR	7.0-9.5	7.1/7.6
						PHENOL	GR	—	5.0

MONITORING DEFICIENCIES:

NEW JERS' EPARTMENT OF ENVIRONMENTAL PROTECTIC
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

Permit # 63953

Date 5/19/87

DISCHARGE SURVEILLANCE REPORT

GROUND WATER DISCHARGE EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	TYPE DGW	S	S I
	RCRA FACILITY	S	IN ME
	DISCHARGE NUMBER	S	SAME AS ABOVE
	WASTEWATER SOURCE/FREQ.	S	STORM WATER TREATED WASTEWATER INTERMITTENT
	PUMPS AND PIPING	S	NO LEAKS OR VIBRATIONS
	ALTERNATE POWER/ALARM	S	NO POWER NO DISCHARGE HIGH LEVEL
	BYPASS	S	NONE
MONITORING SYSTEM	WATER SUPPLY/MONITORING	S	MUNICIPAL SUPPLY
	AQUIFERS MONITORED	S	SHALLOW
	UPGRADIENT WELLS	S	4-66 ALONG N BOUNDARY SWMP AREA
	DOWNGRADIENT WELLS	S	1-55, 2-55, 3-65 S. BOUNDARY SWMP AREA
	SAMPLING PLAN	S	AS PER PERMIT
	SAMPLING PROCEDURES	S	AS SPECIFIED IN PLAN & PERMIT
	LAB CERTIFICATION	S	BCH #7717.5
	RECORDS	S	AT PLANT SITE
	REPORTING	S	PROPERLY REPORTED AS OCCASION REQUIRES
			31-
LYSIMETER/ MONITORED WELLS	DRILLING PERMIT NUMBERS	M	25960-6, 25549-4, 25595-1, 25401-4
	WELLS NUMBERED/IDENTIFIED	S	/ MODIFIED FROM S MW REQUIRED IN PERMIT
	LOCKS/INTEGRITY	S	
	ABANDONMENT PLAN	S	
	ELEVATION INFORMATION	S	TO TOP OF CASING
	WATER LEVEL MEASUREMENT	S	WITH MEASURING TAPE
	TURBIDITY FREE	S	
	SUFFICIENT YIELD	S	
UIC	CLASSIFICATION	N/A	
	PERC./LEACHING PROBLEMS		
	SOLVENTS/REPAIRS MADE		
	MAX. PRESSURE & VOLUME		
	CLOSEST USDW/SUPPLY WELLS		
	MOUND INTEGRITY/COVER		
IMPOUNDMENT	LINING INTEGRITY	S	CONCRETE
	EMBANKMENT INTEGRITY	S	CINDER BLOCK
	LEACHATE COLLECTION SYS.	N/A	IMPERVIOUS
	SOLIDS BUILDUP/REMOVAL	S	SKIMMED AS REQUIRED
	HEIGHT TO FREEBOARD	S	MORE THAN 3'
	APPEARANCE	S	EFFLUENT CLEAR
LAND APPLICATION/ SPRAY SYSTEM	EVEN DISTRIBUTION	N/A	
	PONDING/RUNOFF/EROSION		
	SPRAY HEADS		
	DISCING		
	COVER CROP		
	APPEARANCE		
	BUFFER ZONE		
	SLUDGE STOCKPILED		
OTHER	SEEPAGE/LEACHING	N/A	
	ODOR/AEROSOLS		
	FLOW MONITORING/RECORDING		

Form DWR 053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08

DISCHARGE SURVEILLANCE REPORT

Page 5 of 6

Permit # 53953

Date 5/19/87

DISCHARGE DATA

SOURCE MRF PERIOD 01/to 03/87

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
501	FLOW	CONT	≥3		501	TSS	GR	—	13
	PH	GR	5 - 9	6.4		TDS		1,000 mg/l	162
	ALUM	GR	—	1.17		VO		20 ppb	<0.005
	Fe	GR	0.1 mg/l	<.002		Zn		1 mg/l	0.05
	Ba	GR	2.0 mg/l	0.06					
	Br	GR	20 ppb	0.013 mg/l					
	Cd	GR	0.02 mg/l	<0.01					
	CrH	"	0.1 mg/l	<0.007					
	CrT	"	0.1 mg/l	<0.07					
	COD	"	—	107					
	Cu	"	2.0 mg/l	<0.07					
	Cn	"	0.4 mg/l	.005					
	Pb	"	0.1 mg/l	<0.003					
	Mg	"	—	5.96					
	Mn	"	0.1 mg/l	<0.07					
	Hg	"	0.004 mg/l	<0.0007					
	Ni	"	—	<0.1					
	O&G	"	20 mg/l	46					
	PHYDR	"	20 mg/l	29					
	PHENL	"	7.0 mg/l	.083					
	SULFIDE	"	500 mg/l	21.0					

MONITORING DEFICIENCIES:

Form DWR 053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

Permit # 53953
Date 5/19/87

DISCHARGE DATA

SOURCE MRF PERIOD 01/ to 03/87

Para	Sample Type	Permit Limits	Well 1-55	Well 2-55	Well 3-65	Well 4-60	Well	Well
		mg/l	mg/l	mg/l	mg/l	mg/l		
Al	GR	—	.421 mg/l	.251 mg/l	.362	.084		
As	"	0.05 ppm	.001	0.009	0.014	.004		
Bw	"	10 ppb	10K	10K	10K	10K		
Ba	"	1.0 ppm	0.2	0.39	0.527	.170		
Cd	"	0.01	.010 K	.010 K	.010 K			
COD	"	—	66 mg/l	50 mg/l	50 mg/l	52 mg/l		
Cr H		0.05	.001 K	.001	.004	0.006		
Cu		1.0	.020 K	.020 K	.020 K	.020 K		
Cn		0.2	.005 K	.005 K	.005 K	.005 K		
Pb		0.05	.002 K	.002 K	.002 K	.002 K		
Mg		—	4.76 mg/l	1.0043	1.890 mg/l	4.76		
Mn		0.05	.150 mg/l	.139 mg/l	.209 mg/l	1.17 mg/l		
Hg		0.002	.0004	0.004	.002	0003		
Ni		—	.10 K mg/l	.0104 mg/l	—	.10 K		
COS		10.0	17 mg/l	12 mg/l	13 mg/l	17		
P. HYDRO		10.0	.4K	.4K	.4K	.4K		
PH		5-9	5.3	5.6	5.7	5.7		
PHENOL		3.5	.008 K	.014	.014	.011		
PCB		0.001	.5K	.5K	.5K	.5K		
SULFATE		250	25 mg/l	41 mg/l	10 mg/l	31 mg/l		
TDS		500	75 mg/l	186 mg/l	217 mg/l	122 mg/l		
TVO		10 ppb	145	136	109	122		
Zn		5	056	.049	.055	.096		

REFERENCE NO. 14

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # 0053953 NO. OF DISCHARGES 001 CLASS MAJ/IND

DISCHARGER PENNSAUKEN FACILITY - SIU/DGW/IWMF

OWNER ALUMINUM SHAPES, INC.

MUNICIPALITY Pennsauken Twp COUNTY CAMDEN WATERSHED CODE D

LOCATION 9000 RIVER ROAD \ P.O. BOX 397 DELAIR, NJ.

RECEIVING WATERS PSA - STP STREAM CLASS N/A

LICENSED OPERATOR & PLANT CLASS ROCCO J. MAIELLANO N-2

TRAINEE/ASSISTANT — OTHER INFO. 662-5500

DEFICIENCIES OR COMMENTS 1) TSS, TOTAL CHROME, ALUMINUM, ZINC pH AND TTO's (Napthalene) were exceeded in 001 Discharge on Page 2, Part III-L of the permit 2.) Base Neutrals [Bis (2-ethlyhexyl) phthalate & butyl benzyl phthalate], total chrome and O&G were exceeded in 501 Discharge on page 1 of Part III-DGW-J, W. 3) Varions parameters permit limits were exceeded on monitoring wells 1 thru 6 for the monitoring period 07/87 thru 10/87. 4) Certain Base Neutrals, PCB's and V.O.'s permit limits were not detected because their Lab was using the wrong Detection limits

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR LEWIS KLAUDI/R. RICCIARDI TITLE ENV. SPECIALIST - TRAINEE, C.I.

INFORMATION FURNISHED BY (Name) Al Willis

(Title) Plant Engineer (Organization) Aluminum Shapes, Inc.

DATE OF INSPECTION Dec. 22, 1987 & Jan. 12, 1988

INDUSTRIAL TREATMENT PROCESS EVALUATION			
RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable			
		RATING	COMMENTS
GENERAL	DISCHARGE # 001	---	001
	WASTEWATER SOURCE(S)	---	SANITARY, CONTACT/NON COOLING, STORMWATER
	CONTINUITY OF OPERATION	---	6 DAYS A WEEK / 24 HRS. PER DAY
	BYPASSES/OVERFLOWS	S	NONE
	S.P.C.C. PLAN	—	EPA TO DETERMINE BASED ON PHYSICAL LOCATION OF FACILITY
	ALARM SYSTEMS	S	HIGH LEVEL, LOCAL SOUND/LIGHT
	ALTERNATE POWER SUPPLY	S	NO POWER NO PRODUCTION
TREATMENT PROCESSES			ALUMINUM MANUFACTURING
	EXTRUSION MACHINES	S	CONTACT COOLING, HYDRAULIC OIL
	OIL WATER SEPARATOR	S	COLLECTS STORMWATER AND HYDRAULIC OIL
	SUMP	S	WATER TO STORAGE TANKS
	INFLUENT SUMP	S	SPRAY/WASH BOOTHS (2 RINSE & 2 ETCH AREAS)
	BATCH TREATMENT TANKS	S	2 STEEL TANKS, ABOVE FLOOR
	REAGENT TANK	S	STEEL TANK, ABOVE FLOOR
SLUDGE HANDLING	HOLDING TANK	S	FIBERGLASS TANK ABOVE THE FLOOR
	FILTER PRESS	S	CAKE IS DRUMMED FOR DISPOSAL
	DISPOSAL SITE	S	S&W KEARNEY CHEM WASTE FT. WAYNE INDIANA
OTHER INFORMATION	FLOW METER & RECORDER	S	AT DISCHARGE TO PSA CALIBRATED QTRLY 10/87
	RECORDS	S	AT PLANT
	SAMPLING PROCEDURES	S	AS PER PERMIT
	ANALYSES PERFORMED BY	S	BCM LABS # 77175
	REPORTING	U	MISSING OPERATING EXCEPTIONS EXPLAINATION ON MONITORING REPORT-TRANSMITTAL LETTER/SHEETS
	FINAL EFFLUENT APPEARENCE	N/A	SNOW COVERED, AT STREET, FLOW 220 GPM
	REC. WATERS APPEARENCE	N/A	TO PSA STP
	OTHER DSW OR DGW ?	S	NONE PER AL WILLIS, PLANT ENGINEER

Form DWR-053
3/81

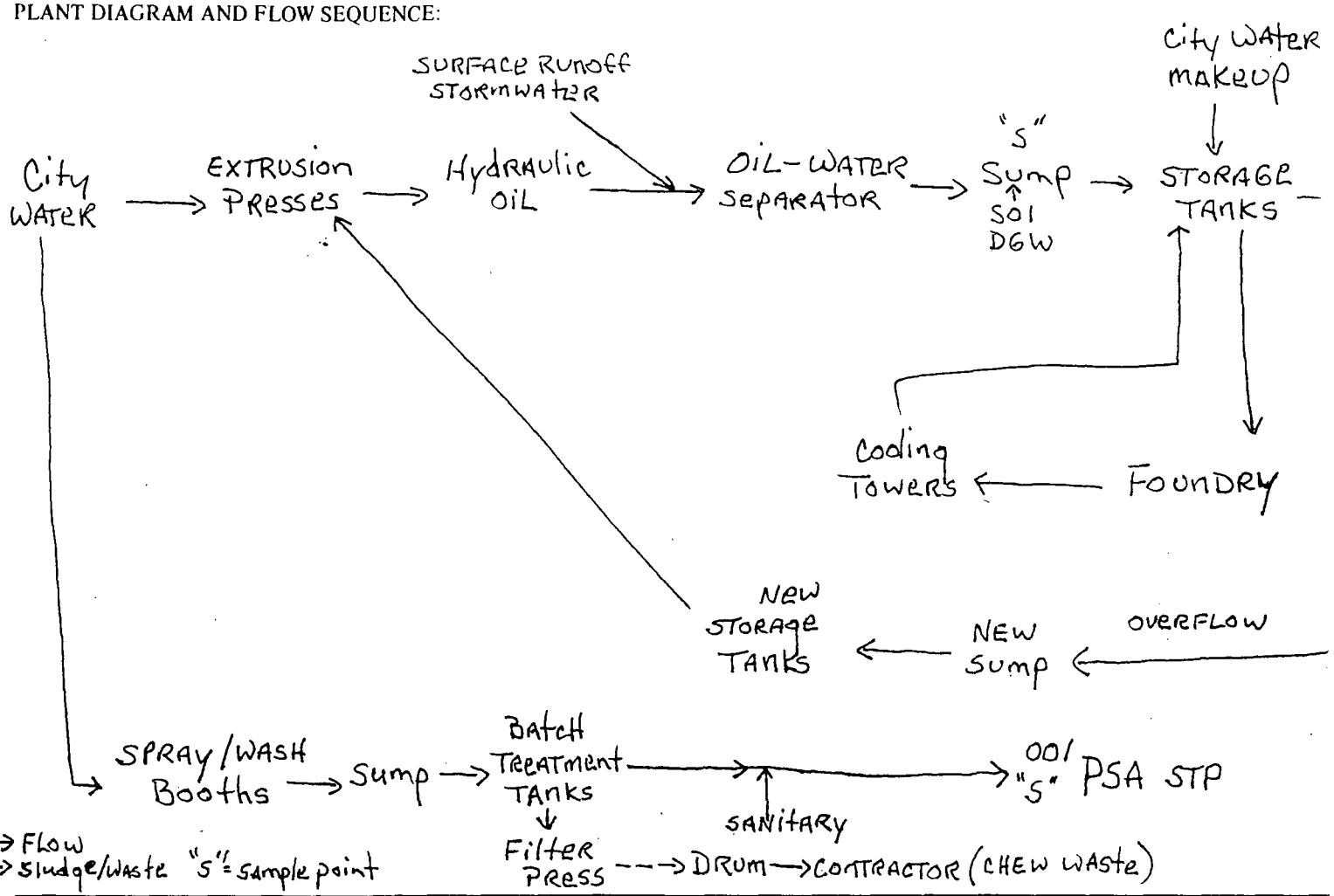
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

Permit # 0053953

DISCHARGE SURVEILLANCE REPORT

Date 12/22/87 JAN 12,1

PLANT DIAGRAM AND FLOW SEQUENCE:



DISCHARGE DATA

SOURCE: MRF

PERIOD: 06/87 THRU 08/87

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
001	Flow	Cont.	.210 MGD	.1845	001	Alumin	Comp.	10 mg/l	520.000
001	COD	GRAB	400 mg/l	199	001	Barium	Comp.	1.2 mg/l	0.131
001	BOD_5	GRAB	250 mg/l	42	001	Zinc	Comp.	1.81 / .75 mg/l	13.300/ 1.23
001	TSS	Comp.	300 mg/l	440	001	cyanid	GRAB	.358/.15 mg/l	<0.005
001	OIL & GREASE	MULT. GRAB	100 mg/l	32	001	TTO_s	GRAB	.848 mg/l	0.264
001	TOTAL CHROM	Comp.	.543 / .223 mg/l	1.730/0.299	001	TEMP	GRAB	65°C	26°C
001	HEX CHROM	Comp.	.1 mg/l	0.041	001	pH	GRAB	7.0 – 9.5 SU	5.7 – 7.2

MONITORING DEFICIENCIES: None

NEW JERSE PARTMENT OF ENVIRONMENTAL PROTECTIO
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

Permit # 00 53953

DISCHARGE SURVEILLANCE REPORT

Date 12/22/87 & JAN 12,

GROUND WATER DISCHARGE EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	TYPE DGW	S	SURFACE Impoundments
	RCRA FACILITY	S	IWMF
	DISCHARGE NUMBER	S	SOI
	WASTEWATER SOURCE/FREQ.	S	STORMWATER Runoff, Treated WASTEWATER
	PUMPS AND PIPING	S	No Leaks
	ALTERNATE POWER/ALARM	S	NO Power - No DISCHARGE - High Level ALARM
	BYPASS	S	None
MONITORING SYSTEM	WATER SUPPLY/MONITORING	S	MUNICIPAL Supply
	AQUIFERS MONITORED	S	SHALLOW
	UPGRADIENT WELLS	S	MW#1-55 AND MW#6-55
	DOWNGRADIENT WELLS	S	MW#2-55, MW#3-65, MW#4-60 & MW#5-60
	SAMPLING PLAN	S	AS PER Permit
	SAMPLING PROCEDURES	S	AS PER Permit
	LAB CERTIFICATION	S	BCM #77175
	RECORDS	S	AT Plant Site,
	REPORTING	U	LAB NOT using Detection Limits Properly; TRANSMITTAL SHEET missing OPERATING EXCEPTIONS EXPLANATIONS 5-60=31-2751-4 & 6-55=31-2751-5
LYSIMETER/ MONITORED WELLS	DRILLING PERMIT NUMBERS	S	1-55=31-25900-6; 2-55=31-25899-9; 3-65=31-25898-1; 4-60=31-2590
	WELLS NUMBERED/IDENTIFIED	U	Wells missing Long. & LAT., elevations DATA on Casting
	LOCKS/INTEGRITY	S	All CAPS LOCKED
	ABANDONMENT PLAN	S	AT SITE
	ELEVATION INFORMATION	U	Well missing ELEVATION, Long. & LAT. DATA on CASTING
	WATER LEVEL MEASUREMENT	S	ON MRF's
	TURBIDITY FREE	S	CLEAR
	SUFFICIENT YIELD	S	13 gal Average
UIC	CLASSIFICATION		
	PERC./LEACHING PROBLEMS		
	SOLVENTS/REPAIRS MADE	N/A	
	MAX. PRESSURE & VOLUME		
	CLOSEST USDW/SUPPLY WELLS		
	MOUND INTEGRITY/COVER		
IMPOUNDMENT	LINING INTEGRITY	S	Concrete
	EMBANKMENT INTEGRITY	S	CINDER Block
	LEACHATE COLLECTION SYS.	N/A	None
	SOLIDS BUILDUP/REMOVAL	S	SKIMMED continuous
	HEIGHT TO FREEBOARD	S	3 feet or more
	APPEARANCE	M	Effluent Turbid
LAND APPLICATION/ SPRAY SYSTEM	EVEN DISTRIBUTION		
	PONDING/RUNOFF/EROSION		
	SPRAY HEADS		
	DISCING		
	COVER CROP		
	APPEARANCE	N/A	
	BUFFER ZONE		
	SLUDGE STOCKPILED		
OTHER	SEEPAGE/LEACHING		
	ODOR/AEROSOLS	N/A	
	FLOW MONITORING/RECORDING		

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCE
CN 029, Trenton, N.J. 08

DISCHARGE SURVEILLANCE REPORT

Permit # 0053953
Date Dec. 22, 1987; 01/12/198

DISCHARGE DATA

SOURCE: MRE PERIOD: 07/87 through 10/87

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA
SOI	Flow	Cont.	0.300 MGD	0.1318	SOI	TSS	Grab	— mg/l	29
	pH	Grab	5-9 s.u.	7.7		TDS	Grab	1,000 mg/l	764
	Alum.	Grab	— mg/l	7.73		VO's	Grab	20 ug/l	8.8
	Arsen	Grab	0.1 mg/l	0.005	↓	Zinc	Grab	10.0 mg/l	0.060
	Bari.	Grab	2.0 mg/l	< 0.05	SOI	Temp	—	—	17.2°C
	Base Neut.	Grab	20 ug/l	45					
	CAD.	Grab	0.02 mg/l	<0.01					
	CHRom. Hex.	Grab	0.1 mg/l	<0.002					
	CHRom Tot.	Grab	0.1 Mg/l	2.12					
	C.O.D.	Grab	— mg/l	489					
	Copper	Grab	2.0 mg/l	< 0.02					
	Cyanide	Grab	0.4 mg/l	<0.0005					
	Lead	Grab	0.1 mg/l	<0.002					
	Magnes	Grab	— mg/l	6.60					
	Manga.	Grab	0.1 mg/l	0.031					
	Merc.	Grab	0.004 mg/l	<.0002					
	Nick.	Grab	— mg/l	<0.10					
	Oil & Grea.	Grab	20.0 mg/l	37.9					
	Phenol	Grab	7.0 mg/l	0.964					
	Pet. Hydro.	Grab	20.0 mg/l	10.7					
↓	Sulfate	Grab	500 mg/l	23.0					

MONITORING DEFICIENCIES: None for SOI, But on Monitoring Well - Labs used Wrong Detection Limits

Form DWR-053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

Permit # 0053953

DISCHARGE SURVEILLANCE REPORT

Date JAN. 12, 1988
DEC. 22, 1987

DISCHARGE DATA

SOURCE: MRF

PERIOD: 07/87 through 10/87

Para	Sample Type	Permit Limits	Well 1-55	Well 2-55	Well 3-65	Well 4-60	Well 5-60	Well 6-55
Alum	Grab	---- mg/l	0.10 mg/l	<0.10 mg/l	<0.10 mg/l	0.194 mg/l	0.10 mg/l	<0.10 mg/l
ARSEN.	Grab	0.05 ppm or mg/l	<0.005 mg/l	0.011 mg/l	0.018 mg/l	<0.005 mg/l	0.006 mg/l	0.011 mg/l
BARium	Grab	1.0 mg/l	.385 mg/l	.270 mg/l	.359 mg/l	.246 mg/l	.373 mg/l	.532 mg/l
Base Neut.	Grab	10 ppb or ug/l	< 10.0 ppb or ug/l	<10.0 ppb or ug/l	14 ppb or ug/l	<50 ppb or ug/l	<50 ppb or ug/l	<50 ppb or ug/l
CAD.	Grab	0.01 mg/l	<0.0001 mg/l	<0.0001 mg/l	<0.0001 mg/l	<0.0001 mg/l	<0.0001 mg/l	<0.0001 mg/l
C.O.D.	Grab	---- mg/l	42 mg/l	67 mg/l	57 mg/l	64 mg/l	86 mg/l	508 mg/l
CHRom. Hex.	Grab	0.05 mg/l	<0.010 mg/l	<0.010 mg/l	<0.010 mg/l	<0.010 mg/l	< 0.010 mg/l	<.010 mg/l
Copper	Grab	1.0 mg/l	<0.020 mg/l	<0.020 mg/l	0.099 mg/l	< 0.020 mg/l	<0.020 mg/l	<0.020 mg/l
Cyanide	Grab	0.2 mg/l	<0.005 mg/l	<0.005 mg/l	<0.005 mg/l	< 0.005 mg/l	<0.005 mg/l	<0.005 mg/l
LEAD	Grab	0.05 mg/l	<0.002 mg/l	omitted	<0.002 mg/l	< 0.002 mg/l	<0.002 mg/l	0.004 mg/l
Magnes	Grab	---- mg/l	6.66 mg/l	3.79 mg/l	5.99 mg/l	3.41 mg/l	6.55 mg/l	9.64 mg/l
Manqan	Grab	0.05 mg/l	0.249 mg/l	1.570 mg/l	3.030 mg/l	1.110 mg/l	1.200 mg/l	5.430 mg/l
Mercury	Grab	0.002 mg/l	<0.0002 mg/l	0.0003 mg/l	<0.0005 mg/l	0.007 mg/l	0.001 mg/l	0.005 mg/l
Nickel	Grab	---- mg/l	0.10 mg/l	<0.10 mg/l	<0.10 mg/l	<0.10 mg/l	<0.10 mg/l	<0.10 mg/l
OIL & Grease	Grab	10.0 mg/l	9.7 mg/l	13.8 mg/l	7.5 mg/l	5.6 mg/l	10.1 mg/l	37.0 mg/l

Form DWR-053
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

Permit # 005395
Date JAN. 12, 198
DEC, 22, 1987

DISCHARGE DATA

SOURCE: MRF

PERIOD: 07/87 through 10/87

Para	Sample Type	Permit Limits	Well 1-55	Well 2-55	Well 3-65	Well 4-60	Well 5-60	Well 6-55
Pet Hydro	Grab	10.0 mg/l	1.0 mg/l	1.2 mg/l	1.2 mg/l	0.5 mg/l	0.5 mg/l	3.7 mg/l
pH	Grab	5-9 SU	5.4 SU	5.2 SU	5.5 SU	5.9 SU	5.9 SU	5.7
PHenols	Grab	3.5 mg/l	<0.002 mg/l	0.002 mg/l	<0.002 mg/l	<0.002 mg/l	<0.002 mg/l	.080 mg/l
PCB's	Grab	0.001 ug/l or ppb	< 5.0 ug/l	<5.0 ug/l	<5.0 ug/l	<5.0 ug/l	<5.0 ug/l	<5.0 ug/l
Sulfate	Grab	250 mg/l	26.0 mg/l	31 mg/l	69 mg/l	29.0 mg/l	40 mg/l	40 mg/l
TDS	Grab	500 mg/l	130 mg/l	86 mg/l	36 mg/l	186 mg/l	150 mg/l	284 mg/l
TOTAL VO	Grab	10 ug/l or ppb	59 ug/l or ppb	<100ppb or ug/l	<100 ppb or ug/l	<100ppb or ug/l	<10 ppb or ug/l	4200 ppb or ug/l
Zinc	Grab	5 mg/l or ppm	0.118 mg/l	0.077 mg/l	0.074 mg/l	0.100 mg/l	0.092 mg/l	0.074 mg/l

REFERENCE NO. 15

DRAFT

GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 4
Contract No. 68016618
William Wood - Project Officer
Loren Hall - Task Manager

Prepared by:

GENERAL SOFTWARE CORPORATION
8401 Corporate Drive
Landover, Maryland 20785

Submitted: June 25, 1984

MASTER AREA REFERENCE FILE (MARF) OF THE 1980 CENSUS

Source

The Master Area Reference File (MARF) is a proprietary product of Donnelly Marketing, Inc., a subsidiary of Dunn and Bradstreet, and is available only to EPA users and to contractors engaged in EPA projects.

Description

The complete corrected MARF of the 1980 Census, with geographic coordinates for small geographic areas, is installed for GEMS on a separate disk pack. It consists of four subfiles, one for each major census geographic region, and is available to users when that disk pack is mounted. The file has a variety of location identification information, including region, state, county, place, census tracts and enumeration districts or block groups (See Figure C-1 for illustrations). It also contains population count by race, the number of occupied and owner-occupied housing units, group quarters, and number of families for all the enumeration districts/block groups for the continental United States, Hawaii, and Alaska.

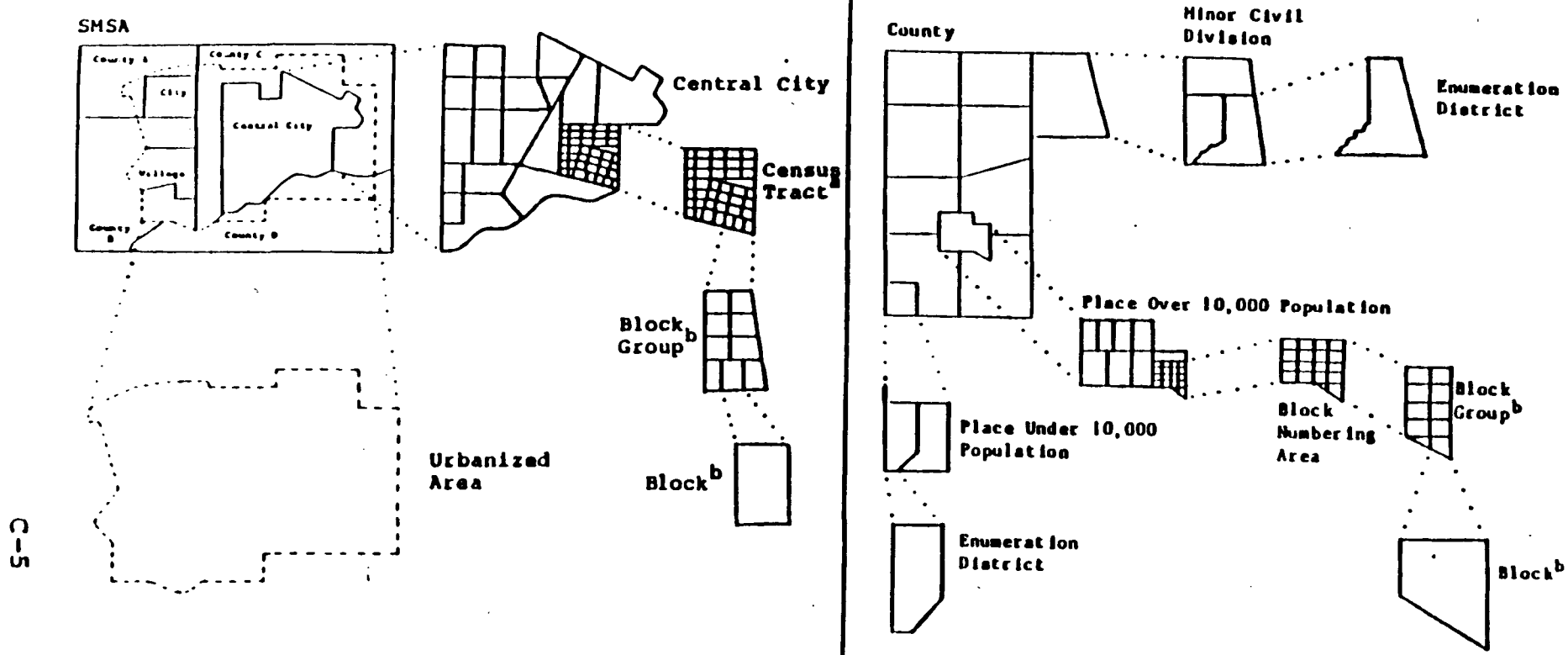
CEDPOP, a subset of the MARF of the 1980 Census, is accessible through GEMS. In addition to total population and household counts, the file includes geographic coordinates for the population-weighted centroid of each census block group or enumeration district (BG/ED) in the file.

Use

The complete MARF 80 Census file, installed in GEMS on a separate disk, is expected to be used heavily by GEMS users to identify household and population by racial groups at any required geographic level. County aggregate populations have already been created from this file.

CEDPOP was interfaced with ATM80 in GEMS to provide estimates of population sizes exposed to concentrations of airborne chemicals around a release site and with BOXMOD80 to provide population estimates within area source regions. The population centroids are identified, and populations are accumulated in sectors (typically the sixteen wind direction sectors) surrounding the center point within a user-specified number of radial distances out from the center.

The CEDPOP file also is accessed by CENSUS DATA and RADII-5 procedures under the GEODATA HANDLING operation in GEMS. CENSUS DATA accumulates population and housing counts by up to ten user-specified radial distances and from one-to-sixteen sectors. The RADII-5 program tabulates the same information (except housing counts) and displays the centroid locations for user-specified circular distances around a center point.



[a]The entire SMSA is subdivided into census tracts.

[b]Blocks and block groups do not have symbolized boundaries as do the other areas, but are identified by number.

Figure C-1. Geographic Hierarchy Inside and Outside Urbanized Areas (UA's)

GEMS> I

ALUMINUM SHAPES INC.
LATITUDE 39:59:15 LONGITUDE 75: 2:38 1980 POPULATION

MI / KM	0-0.25 / 0.00-.400	0.25-0.50 / .400-.810	0.50-1.0 / .810-1.60	1.0-2.0 / 1.60-3.20	2.0-3.0 / 3.20-4.80	3.0-4.0 / 4.80-6.40	SECTOR TOTALS
S 1	0	21	3636	21947	88265	196194	310063
RING TOTALS	0	21	3636	21947	88265	196194	310063
			21	3657	25604	113,869	
			3,657	25,604	113,869	310,063	
			(0-1.0)	(0-2.0)	(0-3.0)	(0-4.0)	

GEMS> I

ALUMINUM SHAPES INC.
LATITUDE 39:59:15 LONGITUDE 75: 2:38 1980 HOUSING

MI / KM	0-0.25 / 0.00-.400	0.25-0.50 / .400-.810	0.50-1.0 / .810-1.60	1.0-2.0 / 1.60-3.20	2.0-3.0 / 3.20-4.80	3.0-4.0 / 4.80-6.40	SECTOR TOTALS
S 1	0	5	1210	7596	31869	71196	111876
RING TOTALS	0	5	1210	7596	31869	71196	111876
			5	1,215	8,811	40,680	
			1,215	8,811	40,680	111,876	
			(0-1.0)	(0-2.0)	(0-3.0)	(0-4.0)	

REFERENCE NO. 16

GEOLOGY AND GROUND-WATER RESOURCES OF CAMDEN COUNTY, NEW JERSEY

By George M. Farlekas, Bronius Nemickas, and Harold E. Gill

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations 76–76

Prepared in cooperation with
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF WATER RESOURCES

June 1976

Cretaceous System

Potomac Group and the Raritan and Magothy Formations

Regional Setting and Stratigraphic Framework

The Potomac Group and the Raritan and Magothy Formations are fluvial-marginal marine sediments of Early to Late Cretaceous age and overlie the pre-Cretaceous crystalline rocks. These sediments make up an extensive part of the Coastal Plain sediments in New Jersey and in the adjacent states. Major structures which contain the greatest thickness of sediments are the Salisbury embayment (Richards, 1945) in Delaware and the Raritan embayment in the vicinity of Raritan Bay and eastern Long Island. The area between these two embayments, which includes Camden County, contains smaller arches and troughs. The outcrop area of the Potomac Group and Raritan and Magothy Formations in Camden County (21 square miles in area) is in the northwestern part of the county near the Delaware River. The units are extensively overlain by permeable Pleistocene deposits in the outcrop area.

The Potomac Group and the Raritan and Magothy Formations form a wedge-shaped body that thickens in a downdip direction and is underlain by the crystalline basement. The configuration of the crystalline rocks is shown in figure 7. The upper limit of the wedge-shaped body is the contact between the Merchantville Formation and the top of the Magothy Formation (fig. 8). The difference between the basement and the top of the Magothy is the total thickness of Potomac Group and the Raritan and Magothy Formations (fig. 9).

In Camden County the thickness of the Potomac Group and Raritan and Magothy Formations ranges from approximately 260 feet at the Collingswood well 7 (CO 7), located near the outcrop area, to approximately 1,210 feet at the New Brooklyn Park test well (WI 27). This is shown on the thickness map in figure 9. The distance between the two wells is 13 miles.

Correlation of part of the Cretaceous stratigraphic section in northern New Jersey and Maryland as determined by Wolfe and Pakiser (1971) is given below.

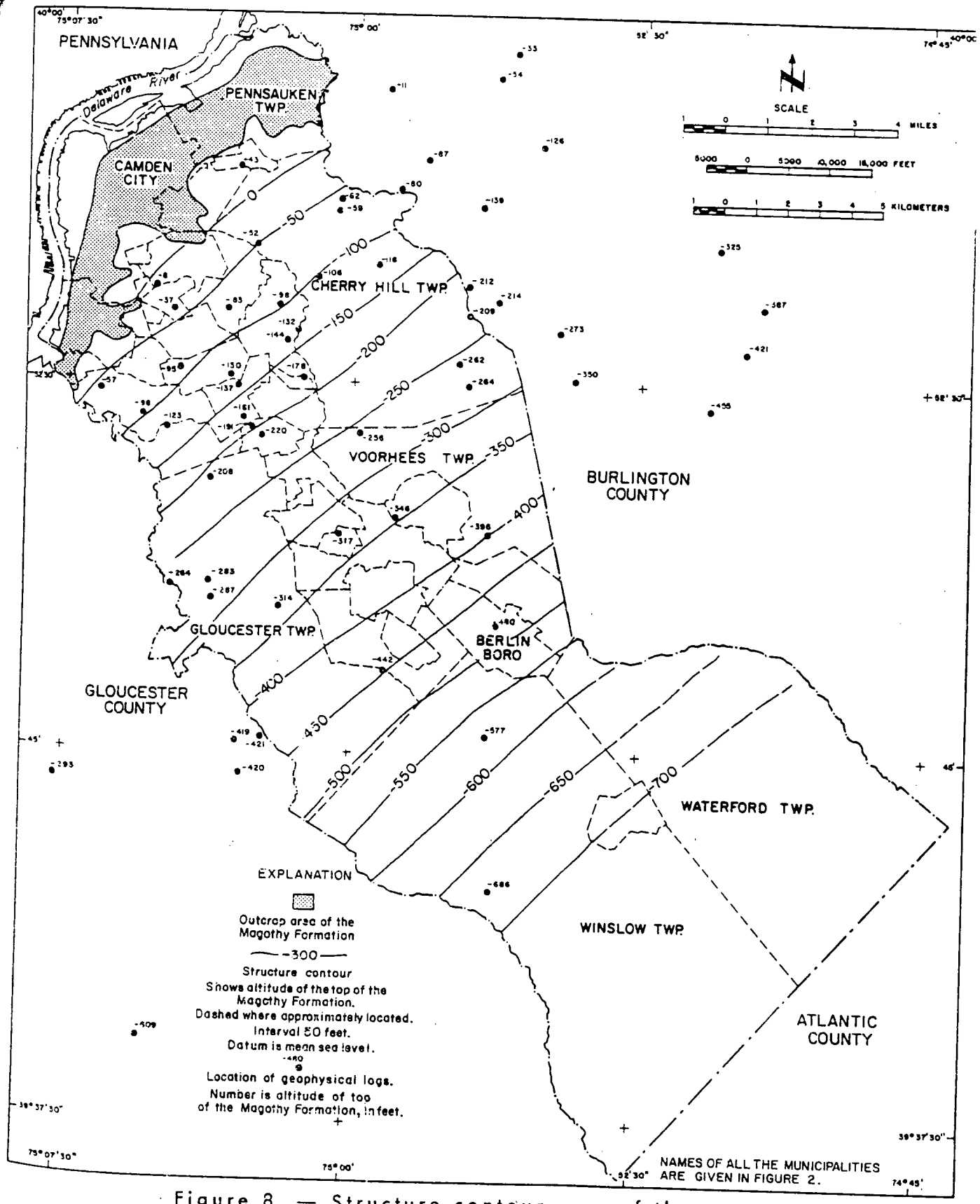


Figure 8. — Structure contour map of the top of the Magothy Formation in Camden County.

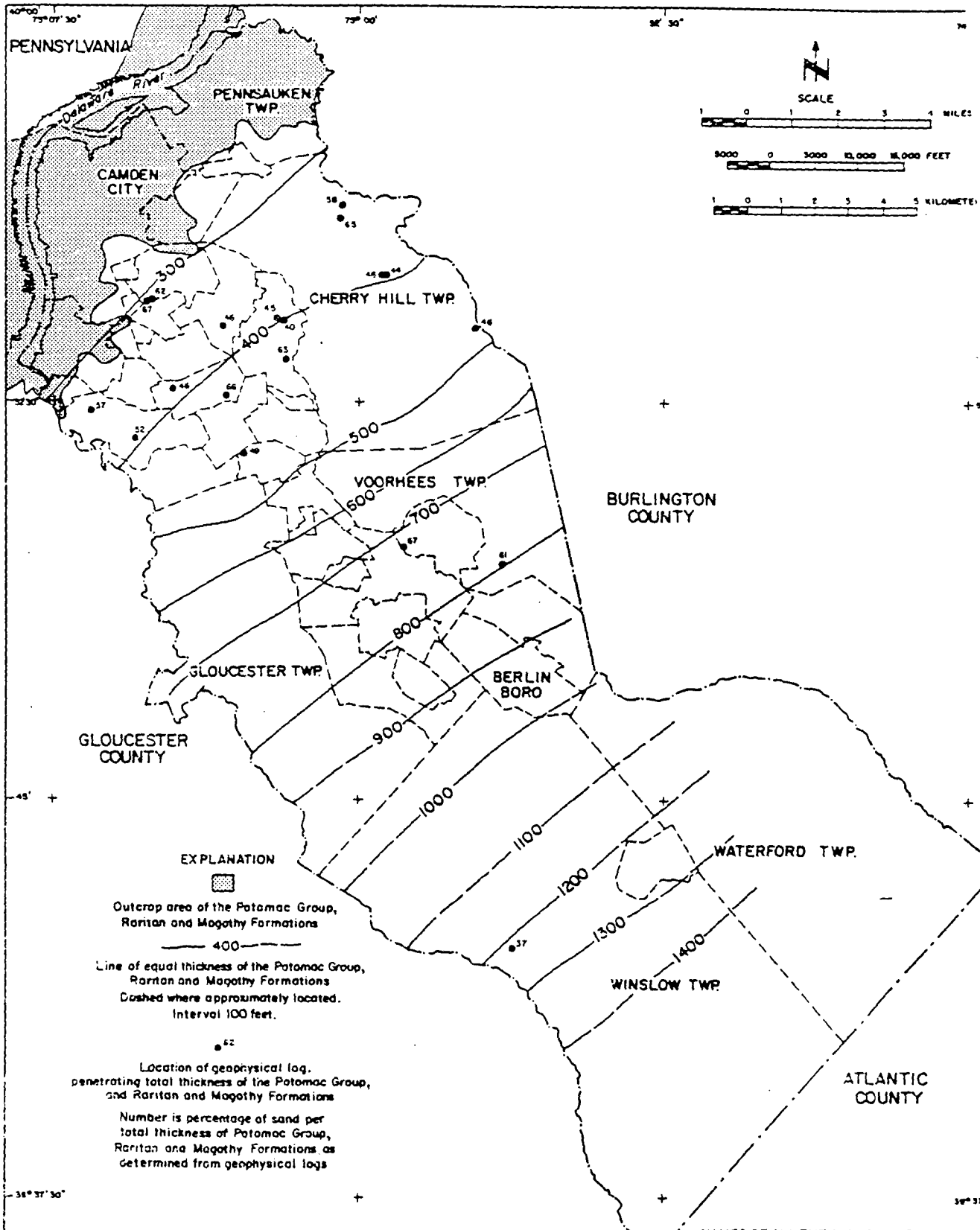


Figure 9. Thickness map of the Potomac Group and the Raritan and Magot
Formations in Camden County.

probably extended from Philadelphia to the area updip from New Brooklyn Park.

A thickness map of the Potomac Group and the Raritan and Magothy Formations is given in figure 9. Also shown is the percentage of sand as estimated from geophysical logs from wells that penetrate the section from the top of the Magothy to the crystalline rocks. The thickness lines show the thickening of the sediments downdip. The percentage of sand indicates greater values in the updip area and lower values in the downdip area. The estimated percentage of sand at the New Brooklyn Park well (WI 27) is 37. Based on the depositional concept developed by Fisher and McGowen (1969) the New Brooklyn Park well is interpreted as being in the distributary channel-marsh and swamp facies. The sediments found in the Haddonfield area are interpreted as including the transitional, slightly meandering channel facies of Fisher and McGowen (1969). The dendritic tributary channel facies is interpreted as occurring in the area from Philadelphia to the northern part of Camden County. The highly meandering channel facies probably occurs in the area downdip from Elm Tree Farms well (VO 12). Lack of data prevents the delineation of the extent of this facies downdip of the Elm Tree Farms area.

Particle-size analysis is available for samples from the New Brooklyn Park test well (WI 27) in Winslow Township (table 5). The particle-size analysis shows the predominant silt and clay values.

Hydrology

The most productive source of ground water in Camden County is the Potomac-Raritan-Magothy aquifer system. The aquifer system is made up of aquifers consisting of sand with some gravel and confining units consisting of silts and clays and is overlain in the outcrop area by highly permeable Pleistocene sand and gravel. The sands are separated into three hydrologic units, an upper, middle, and lower aquifer. The upper unit consists mainly of the sands of the Magothy Formation. The middle and lower units consist mainly of sands of the Raritan Formation and the Potomac Group. The thickness of the three hydrologic units are shown in figures 11, 12, and 13. The lower aquifer in the outcrop area is overlain by and hydraulically connected to the Pleistocene deposits and is a water-table aquifer in Philadelphia. The upper aquifer in the outcrop area is overlain by and hydraulically connected to the Pleistocene deposits in Camden County and is under water-table conditions.

Patterns of Ground-water Movement

Pattern before development.--The natural ground-water flow regimen for the aquifer system prior to development was influenced by topography. The topographically high areas are the natural recharge zones for much of the ground-water system in the Coastal Plain. In areas of topographic highs the prepumping potentiometric surface of each aquifer was greater than that of the aquifer below. This indicates that vertical movement of ground water was downward through the semipervious confining units into the Potomac-Raritan-Magothy aquifer system. The discharge areas were the Delaware River, and to some extent, the topographic lows or stream valleys which cut across the outcrop areas.

The potentiometric map (fig. 14) represents the average natural conditions prior to 1900 for the Potomac-Raritan-Magothy aquifer system in Camden County. Most of the data for the map are from the annual reports of the State Geologist for the period 1888-1909. Water-level data for years after 1900 were used when there was reasonable certainty that the levels were indicative of natural or prepumpage conditions. In Camden County the topographically high recharge area occurs in northern Voorhees Township and southern Cherry Hill Township (fig. 14).

Pattern after development.--The first public-water supply obtained from the Potomac-Raritan-Magothy aquifer system and the hydraulically connected Pleistocene sediments in Camden County was from the Morris well field of the City of Camden in 1898. As the Camden City area's population and industry grew its need for ground water increased. Thompson (1932) describes in detail the ground-water development of the Camden area for 1898-1927. His data for Camden County were used to determine the annual pumpage from the Potomac-Raritan-Magothy aquifer system and the hydraulically connected Pleistocene sediments for 1917-27 shown in figure 15. Withdrawals by industrial wells were estimated by the present authors to be 4 mgd for 1917-27.

The early development of water in the Potomac-Raritan-Magothy aquifer system in Camden County was centered in the vicinity of Camden City, the area containing greatest concentration of population and industry. In later years suburban development had moved southeastward. During the 1950's and 1960's many new public-supply wells were drilled in

in detail by Gill and Farlekas (written commun., 1969).

The source of water in the Potomac-Raritan-Magothy aquifer system in Camden County is therefore 1) precipitation on the outcrop area and induced recharge from streams located in the outcrop area, for example, the Delaware River, 2) recharge through the confining units, 3) water released from storage from the silts and clays of the Potomac Group and Raritan and Magothy Formations and overlying units, and 4) water from the adjacent areas as the cone of depression expands.

Aquifer Characteristics

A number of aquifer tests in the Camden County area for wells tapping the Potomac-Raritan-Magothy aquifer system have been evaluated in the past using the Theis nonequilibrium method (Ferris and others, 1962, p. 92), which assumes that the confining layers are impermeable. Results were reported in Barksdale and others (1958, p. 96-98) and Rush (1968, p. 32-33). Four of these aquifer tests have been re-evaluated (Harold Meisler, written commun., 1973) to include leaky artesian aquifer conditions proposed by Hantush (1960). Two of the four re-evaluated aquifer tests are for wells located in Camden County near the Delaware River and tap the middle aquifer of the Potomac-Raritan-Magothy aquifer system. The results of the test at the site of the Camden Water Department well 14 (CA 18) indicate that the transmissivity ranges from 2,300 to 6,700 ft^2/day (17,000-50,000 gpd/ft) with an average of 4,300 ft^2/day (32,000 gpd/ft^2). The storage coefficient ranges from 1.0×10^{-4} to 3.5×10^{-4} with an average of 1.8×10^{-4}. The re-evaluated results of the aquifer test at the Stockton pumping station (Camden Division) of the New Jersey Water Company indicate that the transmissivity ranges from 3,200 to 3,700 ft^2/day (24,000-28,000 gpd/ft) and the storage coefficient ranges from 3.3×10^{-5} to 1.5×10^{-3}.

Many large diameter high-yielding wells tap the Potomac-Raritan-Magothy aquifer system. The yields of 106 wells in Camden County (diameter 12 inches or greater) range from 455 to 1,900 gpm (gallons per minute) (table 1). The average yield for 106 wells is 1,085 gpm. The specific capacities of these wells are high, indicating a high aquifer transmissivity. The range of specific capacity of 96 wells (diameter 12 inches or greater) tapping the Potomac-Raritan-Magothy aquifer system in Camden County is 6.1 to 80 gpm/ft (gallons per minute per foot of drawdown) (table 1). The average specific capacity of these wells is 29.3

TABLES*

* Wells underlined or boxed in are within 3 miles of the site and draw from the aquifer of concern.

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			CAMDEN COUNTY					
GT-22	GLOUCESTER TWP	394759N0750158.1	GARDEN STATE WC	TEST 1	1970	78	+58	466
GT-23	GLOUCESTER TWP	394754N0750343.1	GAR ST WC-BLKWD	BLACKWOOD DIV 3	1956	81	+26	447
GT-24	GLOUCESTER TWP	394739N0750227.1	GLOU TWP BD ED	LEWIS SCHOOL	1964	117	+55	475
GT-25	GLOUCESTER TWP	394719N0750146.1	ROBERT BENNETT	MONARCH BOILER	1968	110	--	200
GT-26	GLOUCESTER TWP	394718N0750341.1	GARDEN STATE WC	PEOPLES 1	1953	55	+19	449
GT-27	GLOUCESTER TWP	394716N0750420.1	CAMDEN COUNTY	LAKELAND 1	--	55	--	420
GT-28	GLOUCESTER TWP	394714N0750410.1	CAMDEN COUNTY	LAKELAND 3	--	25	--	93
GT-29	GLOUCESTER TWP	394712N0750413.1	CAMDEN COUNTY	LAKELAND 2	--	25	--	386
GT-30	GLOUCESTER TWP	394712N0750220.1	SOCIETY DIVINE	SAVIOR	1951	137	+92	512
GT-31	GLOUCESTER TWP	394711N0750416.1	CAMDEN COUNTY	LAKELAND FOUNT	--	25	--	--
GT-32	GLOUCESTER TWP	394702N0750321.1	MYRA LORING	--	1957	73	109	130
GT-33	GLOUCESTER TWP	394658N0750305.1	P HENDRICKS	--	1956	91	100	135
GT-34	GLOUCESTER TWP	394641N0745959.1	P BARATTA	--	1951	180	56	66
GT-35	GLOUCESTER TWP	394626N0750015.1	A MINARDI	1	1954	175	52	62
GT-36	GLOUCESTER TWP	394620N0750022.1	ROBERT BENNETT	HOME WELL	--	172	--	72
GT-37	GLOUCESTER TWP	394618N0750235.1	H A SANDBERG	--	1952	130	218	250
GT-38	GLOUCESTER TWP	394617N0750237.1	J BECICA	--	1949	111	200	220
GT-39	GLOUCESTER TWP	394614N0750017.1	POWELL	--	1951	178	49	54
GT-40	GLOUCESTER TWP	394607N0750031.1	GLOUCESTER TWP	BD OF EDUCATN	1960	178	293	315
GT-41	GLOUCESTER TWP	394606N0750016.1	F MORRISEY	--	1955	178	55	65
GT-42	GLOUCESTER TWP	394605N0750016.1	HOWARD MORRISEY	--	1956	178	55	60
GT-43	GLOUCESTER TWP	394558N0750210.1	E G MOTHO	--	1955	98	122	135
GT-44	GLOUCESTER TWP	394556N0745835.1	CAMDEN CO BD ED	VOC&TECH H S 1	1967	145	322	401
GT-45	GLOUCESTER TWP	394512N0750145.1	WALTER JOHNSON	--	1954	110	220	240
GT-46	GLOUCESTER TWP	394509N0745958.1	US ARMY	--	1954	173	82	102
GT-47	GLOUCESTER TWP	394430N0745958.1	US ARMY	--	1954	170	62	82
GT-48	GLOUCESTER TWP	394421N0750025.1	JOSEPH A WELZI	--	1952	162	58	64
GT-49	GLOUCESTER TWP	394343N0750049.1	B W BAUER	--	1951	164	40	45
HA-1	HADDON TWP	395444N0750316.1	MILGRAM THEATER	WESTMONT	--	50	135	150
HA-2	HADDON TWP	395436N0750252.1	MORGAN BROTHERS	REPLACEMENT	1967	50	431	451
HA-3	HADDON TWP	395416N0750336.1	HADDON TWP BD E	HADDON TWP HS1	1966	10	141	165
HA-4	HADDON TWP	395412N0750338.1	HADDON TWP W O	HTWD 4	1965	82	417	448
HA-5	HADDON TWP	395406N0750317.1	HADDON TWP W O	HTWD 1	1952	56	436	468
HA-6	HADDON TWP	395406N0750317.2	HADDON TWP W O	HTWD 1-R	1968	56	--	480
HA-7	HADDON TWP	395403N0750322.1	HADDON TWP W O	HTWD 2	1952	50	439	470
HA-8	HADDON TWP	395359N0750322.1	HADDON TWP W O	HTWD 3	1956	61	432	469
HA-9	HADDON TWP	395351N0750313.1	GREEN VALLEY FM	FARM 2	1965	77	194	215
HF-1	HADDONFIELD BORO	395404N0750202.1	HADDONFIELD W O	TEST WELL 1965	1965	45	490	510
HF-2	HADDONFIELD BORO	395404N0750202.2	HADDONFIELD W O	LAKE ST WELL	1967	50	307	372
HF-3	HADDONFIELD BORO	395333N0750132.1	HADDONFIELD W O	RULON	1956	20	523	572
HF-4	HADDONFIELD BORO	395324N0750138.1	HADDONFIELD W O	CREEK 3	1938	18	211	245
HF-5	HADDONFIELD BORO	395322N0750154.1	HADDONFIELD W O	LAYNE 2	1956	30	206	246
HF-6	HADDONFIELD BORO	395322N0750147.1	HADDONFIELD W O	HWD 2	1956	38	152	192
HF-7	HADDONFIELD BORO	395317N0750141.1	HADDONFIELD W O	HWD 4	1943	18	186	240
HH-1	HADDON HGTS BORO	395248N0750433.1	NJ WATER CO	EGGBERT 18	1958	22	144	191
HH-2	HADDON HGTS BORO	395248N0750433.2	NJ WATER CO	EGGBERT 6	1926	23	154	202
HH-3	HADDON HGTS BORO	395247N0750432.1	NJ WATER CO	EGGBERT 35	1967	22	425	484
HH-4	HADDON HGTS BORO	395246N0750433.1	NJ WATER CO	EGBERT	1962	24	445	455
HH-5	HADDON HGTS BORO	395242N0750320.1	NJ WATER CO	HADDON 11	1945	84	212	272
HH-6	HADDON HGTS BORO	395240N0750324.1	NJ WATER CO	HADDON 14	1954	76	506	598
HH-7	HADDON HGTS BORO	395240N0750318.1	NJ WATER CO	HADDON 12	1947	66	227	267
HH-8	HADDON HGTS BORO	395238N0750317.1	NJ WATER CO	HADDON 30	1965	65	224	279
HH-9	HADDON HGTS BORO	395238N0750316.1	NJ WATER CO	HADDON 15	1956	65	452	631
HH-10	HADDON HGTS BORO	395231N0750314.1	NJ WATER CO	HADDON 20	1958	60	241	275
LS-1	LAUREL SPRGS BORO	394928N0750027.1	NJ WATER CO	LAUREL 15	1964	75	395	473
LS-2	LAUREL SPRGS BORO	394928N0750024.1	NJ WATER CO	LAUREL 13	1954	77	395	456
LS-3	LAUREL SPRGS BORO	394928N0750023.1	NJ WATER CO	LAUREL 6	1918	77	--	120
LS-4	LAUREL SPRGS BORO	394928N0750021.1	NJ WATER CO	LAUREL 8	1920	77	105	125
LS-5	LAUREL SPRGS BORO	394928N0750021.2	NJ WATER CO	LAUREL 10	1923	77	99	126
LS-6	LAUREL SPRGS BORO	394927N0750025.1	NJ WATER CO	LAUREL 4	1918	77	--	128
LS-7	LAUREL SPRGS BORO	394927N0750024.1	NJ WATER CO	LAUREL 1	1918	77	100	120
LI-1	LINDENWOLD BORO	394932N0745854.1	MUN UTIL AUTH	SEWAGE PLANT 1	1964	78	141	152
LI-2	LINDENWOLD BORO	394929N0745208.1	J A PIPPET	--	1954	93	92	100
LI-3	LINDENWOLD BORO	394805N0745732.1	LINDENWOLD ANM	ANIMAL SHELT 1	1967	160	--	285
MA-1	MAGNOLIA BORO	395135N0750246.1	OWENS CORNING	CORNING 2	1956	67	290	320
MA-2	MAGNOLIA BORO	395134N0750251.1	OWENS CORNING	TEST 2	1964	65	565	680
MA-3	MAGNOLIA BORO	395134N0750230.1	NJ WATER CO	MAGNOLIA 33	1967	60	271	348
MA-4	MAGNOLIA BORO	395134N0750229.1	NJ WATER CO	MAGNOLIA 16	1964	70	428	510
ME-1	MERCHANTVILLE BORO	395652N0750307.1	MERCH-PENNS W C	WOODBINE 1	1963	90	245	285
OA-1	OAKLYN BORO	395358N0750447.1	NJ WATER CO	OAKLYN TEST	1961	33	104	113
PE-1	PENNSAUKEN TWP	395943N0750212.1	CAMDEN CITY W O	MORRIS 1	--	9	77	107
PE-2	PENNSAUKEN TWP	395940N0750230.1	CAMDEN CITY W O	MORRIS 5NA	1960	5	79	114
PE-3	PENNSAUKEN TWP	395939N0750229.1	CAMDEN CITY W O	MORRIS 5	1932	5	80	115
PE-4	PENNSAUKEN TWP	395934N0750229.1	CAMDEN CITY W O	MORRIS 3A	1953	17	73	107
PE-5	PENNSAUKEN TWP	395929N0750253.1	CAMDEN CITY W O	MORRIS 4A	1960	8	95	134
PE-6	PENNSAUKEN TWP	395929N0750251.2	CAMDEN CITY W O	MORRIS 4	--	8	95	130
PE-7	PENNSAUKEN TWP	395925N0750230.1	KINGSTON TRAP	TRAP RK IND 2	1966	35	115	123
PE-8	PENNSAUKEN TWP	395923N0750300.1	CAMDEN CITY W O	MORRIS 10	1960	16	75	115
PE-9	PENNSAUKEN TWP	395916N0750303.1	CAMDEN CITY W O	MORRIS 7	1932	10	85	120
PE-10	PENNSAUKEN TWP	395910N0750307.1	CAMDEN CITY W O	MORRIS 8	--	10	89	124

Classified well used for drinking

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLI-DATED ROCK (FT)	CASING DIAM-ETER (IN)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAW DOWN (FT)	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
					CAMDEN COUNTY						
GT-22	10	--	5	125	11-70	75	33	2.3	5	U	KJ MR
GT-23	21	--	12	98	7-56	708	43	16.5	8	P	KJ MR
GT-24	20	--	5	129	8-64	220	56	3.9	8	T	KJ MR
GT-25	--	--	4	50	11-68	100	--	--	1	N	KJ MW
GT-26	30	--	5	70	--	--	--	--	--	P	KJ MR
GT-27	--	--	--	--	--	--	--	--	--	T	KJ MR
GT-28	--	--	--	F	8-70	--	--	--	--	T	KJ MW
GT-29	--	--	--	--	--	--	--	--	--	T	KJ MR
GT-30	20	--	10	103	4-51	510	100	5.1	72	H	KJ MR
GT-31	--	--	--	-34	8-70	--	--	--	--	T	KJ MW
GT-32	21	--	3	25	11-57	100	--	--	3	H	KJ MW
GT-33	--	--	4	6	10-56	150	--	--	4	H	KJ NA
GT-34	10	--	3	35	10-51	25	5	5.0	--	H	AA CP
GT-35	10	--	3	32	7-54	8	3	2.7	6	H	AA CP
GT-36	--	--	--	--	--	--	--	--	--	--	AA CP
GT-37	32	--	4	48	6-52	170	--	--	--	H	KJ MW
GT-38	20	--	4	40	11-49	50	--	--	2	H	KJ MW
GT-39	5	--	3	30	11-51	5	6	0.8	--	H	AA CP
GT-40	--	--	6	125	4-60	80	--	--	8	H	KJ MW
GT-41	10	--	4	40	9-55	30	5	6.0	3	H	AA CP
GT-42	5	--	4	38	10-56	25	4	6.2	2	H	AA CP
GT-43	13	--	4	159	1-55	100	--	--	5	H	TL VH
GT-44	79	--	8	113	9-57	320	123	2.6	8	P	KJ MW
GT-45	20	--	4	40	11-54	80	15	5.3	5	H	TL MT
GT-46	20	--	8	36	6-54	240	48	5.0	24	P	AA CP
GT-47	20	--	8	30	6-54	240	40	6.0	24	P	AA CP
GT-48	6	--	4	24	9-52	25	--	--	5	H	AA CP
GT-49	5	--	3	20	10-51	5	5	1.0	--	H	AA CP
MA-1	15	--	8	--	--	150	--	--	--	--	KJ MR
MA-2	--	445	10	104	--	302	--	--	8	N	KJ MR
MA-3	20	--	6	60	11-66	200	23	8.7	--	I	KJ MR
MA-4	27	465	12	100	8-65	726	42	17.3	8	P	KJ MR
MA-5	32	475	10	80	2-52	800	40	20.0	8	P	KJ MR
MA-6	--	--	12	125	11-68	870	--	--	8	P	KJ MR
MA-7	31	--	10	74	4-52	1000	41	24.4	8	P	KJ MR
MA-8	37	--	10	95	6-56	800	35	22.9	--	P	KJ MR
MA-9	21	--	6	121	1-65	151	12	12.6	6	I	KJ MR
MF-1	20	553	6	90	1-65	350	35	10.0	8	U	KJ MR
MF-2	50	--	12	107	5-67	1030	48	21.5	8	P	KJ MR
MF-3	49	--	12	42	6-56	1100	38	28.9	48	P	KJ MR
MF-4	33	--	8	56	7-59	450	54	8.3	--	--	KJ MR
MF-5	40	--	12	105	5-56	1001	46	21.8	8	P	KJ MR
MF-6	40	--	8	55	7-59	600	31	19.4	--	P	KJ MR
MF-7	54	--	6	56	3-56	600	26	23.1	8	P	KJ MR
MM-1	47	--	12	69	7-58	708	45	15.7	8	P	KJ MR
MM-2	48	--	8	23	-26	535	25	21.4	3	P	KJ MR
MM-3	44	477	12	83	3-67	850	60	14.2	8	P	KJ MR
MM-4	10	479	6	61	1-62	30	30	1.0	8	U	KJ MR
MM-5	60	--	12	123	--	450	--	--	--	P	KJ MR
MM-6	53	603	8	101	8-54	1018	88	11.6	6	P	KJ MR
MM-7	40	--	10	93	--	--	--	--	--	P	KJ MR
MM-8	51	--	--	129	3-65	811	38	21.3	--	P	KJ MR
MM-9	74	--	8	72	2-56	1100	35	31.4	6	P	KJ MR
MM-10	31	--	12	36	8-58	950	52	18.3	8	P	KJ MR
LS-1	64	--	8	130	--	650	98	6.6	24	P	KJ MR
LS-2	61	--	8	84	6-54	759	80	9.5	--	P	KJ MR
LS-3	--	--	8	--	--	--	--	--	--	U	KJ MW
LS-4	20	--	8	44	9-52	175	--	--	--	P	KJ MW
LS-5	--	--	8	--	--	200	--	--	--	P	KJ MW
LS-6	--	--	8	--	--	330	--	--	--	P	KJ MW
LS-7	--	--	8	--	--	300	--	--	--	P	KJ MW
LI-1	11	--	6	16	11-64	50	--	--	--	--	KJ MW
LI-2	--	--	3	18	7-54	14	--	--	7	H	TL VH
LI-3	--	--	4	--	--	--	--	--	--	H	KJ MW
MA-1	30	--	12	96	3-56	1000	41	24.4	8	N	KJ MR
MA-2	60	--	6	128	6-64	668	48	13.9	22	N	KJ MR
MA-3	77	--	12	141	3-67	1090	46	23.7	24	P	KJ MR
MA-4	--	--	--	--	--	--	--	--	--	P	KJ MR
ME-1	--	--	12	85	9-63	1040	--	--	--	P	KJ MR
OA-1	8	--	6	56	10-61	50	16	3.1	16	U	KJ MR
PE-1	30	--	18	--	--	1180	--	--	--	P	KJ MR
PE-2	35	--	18	12	11-60	1450	46	31.5	--	P	KJ MR
PE-3	35	--	26	15	8-32	1630	37	44.1	8	P	KJ MR
PE-4	30	136	30	12	7-53	1000	34	29.4	8	P	KJ MR
PE-5	35	--	18	13	10-60	1585	28	56.6	8	P	KJ MR
PE-6	35	--	26	--	--	--	--	--	--	P	KJ MR
PE-7	8	--	8	26	8-66	200	34	5.9	2	N	KJ MR
PE-8	40	--	18	11	11-61	1450	35	41.4	8	P	KJ MR
PE-9	35	--	26	13	--	1680	32	52.5	8	P	KJ MR
PE-10	35	--	26	--	--	1412	--	--	--	P	KJ MR

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			CAMDEN COUNTY					
PE-11	PENNSAUKEN TWP	395906N0750313.1	CAMDEN CITY W D	MORRIS 9	1932	10	118	143
PE-12	PENNSAUKEN TWP	395902N0750318.1	CAMDEN CITY W D	MORRIS 6	1932	8	98	133
PE-13	PENNSAUKEN TWP	395902N0750153.1	MERCH-PENNS W C	NATIONAL HWY 1	1967	40	195	231
PE-14	PENNSAUKEN TWP	395853N0750348.1	CAMDEN CITY W D	DELAIR 3	1930	8	86	126
PE-15	PENNSAUKEN TWP	395851N0750355.1	CAMDEN CITY W D	DELAIR 2	1930	10	111	141
PE-16	PENNSAUKEN TWP	395848N0750347.1	CAMDEN CITY W D	DELAIR 1	1960	10	103	138
PE-17	PENNSAUKEN TWP	395845N0750317.1	CAMDEN CITY W D	PUCHACK 3	1924	10	127	175
PE-18	PENNSAUKEN TWP	395845N0750312.1	CAMDEN CITY W D	PUCHACK 1	1924	10	108	140
PE-19	PENNSAUKEN TWP	395844N0750352.1	PENNSYLVANIA RR	PRR TEST 1	1951	30	102	122
PE-20	PENNSAUKEN TWP	395842N0750312.1	CAMDEN CITY W D	PUCHACK 2	1924	14	126	169
PE-21	PENNSAUKEN TWP	395839N0750306.1	CAMDEN CITY W D	PUCHACK 4	1924	10	136	184
PE-22	PENNSAUKEN TWP	395837N0750151.1	CHRISTIAN BR SM	1	1950	73	125	136
PE-23	PENNSAUKEN TWP	395835N0750308.1	CAMDEN CITY W D	PUCHACK 5	1924	19	136	186
PE-24	PENNSAUKEN TWP	395827N0750246.1	H W LAYER	--	1951	40	127	137
PE-25	PENNSAUKEN TWP	395815N0750359.1	PARAGON OIL CO	1	1961	25	51	61
PE-26	PENNSAUKEN TWP	395811N0750549.1	CITIES SERVICE	PETTY IS OBS	--	11	--	143
PE-27	PENNSAUKEN TWP	395802N0750118.1	MERCH-PENNS W C	PARK AVE 2	1943	12	232	257
PE-28	PENNSAUKEN TWP	395802N0750117.1	MERCH PENNS W C	PARK AVE 1	1947	19	240	270
PE-29	PENNSAUKEN TWP	395801N0750119.1	MERCH PENNS W C	PARK AVE 3	1958	19	240	275
PE-30	PENNSAUKEN TWP	395800N0750125.1	MERCH PENNS W C	PARK AVE 4	1933	20	146	181
PE-31	PENNSAUKEN TWP	395800N0750115.1	MERCH-PENNS W C	PARK AVE REP 6	1940	15	212	260
PE-32	PENNSAUKEN TWP	395758N0750120.1	MERCH-PENNS W C	PARK AVE 5	1948	20	248	298
PE-33	PENNSAUKEN TWP	395757N0750640.1	U S GEOL SURVEY	PETTY I WEST 1	1966	5	77	84
PE-34	PENNSAUKEN TWP	395752N0750411.1	MERCH-PENNS W C	DELA GARDEN 1	1945	50	97	123
PE-35	PENNSAUKEN TWP	395752N0750411.2	MERCH-PENNS W C	DELA GARDEN 2	1955	39	115	145
PE-36	PENNSAUKEN TWP	395752N0750411.3	MERCH-PENNS W C	DELA GARDEN 1A	1968	50	109	139
PE-37	PENNSAUKEN TWP	395737N0750626.1	U S GEOL SURVEY	PETTY ISLAND 2	1966	5	--	129
PE-38	PENNSAUKEN TWP	395737N0750626.2	U S GEOL SURVEY	PETTY I EAST 3	1966	5	44	55
PE-39	PENNSAUKEN TWP	395720N0750225.1	MERCH-PENNS W C	MARION 1	1957	61	243	278
PE-40	PENNSAUKEN TWP	395713N0750405.1	MERCH-PENNS W C	AMON HGTS 2	1923	69	157	176
PE-41	PENNSAUKEN TWP	395711N0750220.1	MERCH-PENNS W C	MARION 2	1963	60	223	258
PE-42	PENNSAUKEN TWP	395628N0750405.1	MERCH PENNS W C	FROSTHOFFER T2	1963	25	204	224
PE-43	PENNSAUKEN TWP	395628N0750406.2	MERCH-PENNS W C	BROWNING 2A	1955	30	110	140
PE-44	PENNSAUKEN TWP	395627N0750404.1	MERCH-PENNS W C	BROWNING 1	1960	25	107	137
PE-45	PENNSAUKEN TWP	395627N0750404.2	MERCH PENNS W C	FROSTHOFFER T1	1963	25	118	138
PH-1	PINE HILL BORO	394707N0745921.1	HARRY WEBER	--	1955	165	56	60
PH-2	PINE HILL BORO	394650N0745922.1	J MC GILLEN	--	1954	160	40	50
PH-3	PINE HILL BORO	394649N0745833.1	PINE HILL M U A	PHMUA 2	1957	160	296	355
PH-4	PINE HILL BORO	394649N0745833.2	PINE HILL M U A	PHMUA 3	1960	160	31	86
PH-5	PINE HILL BORO	394642N0745953.1	LEROY KINGETT	--	1949	180	337	347
PH-6	PINE HILL BORO	394641N0745909.1	PINE HILL M U A	PHMUA 1	1962	150	600	687
PH-7	PINE HILL BORO	394639N0745750.1	OVERBROOK REG H	--	1971	160	310	330
PV-1	PINE VALLEY BORO	394728N0745837.1	JOHN GALBRAITH	--	1952	170	300	355
PV-2	PINE VALLEY BORO	394722N0745810.1	PINE VALLEY G C	GOLF CLUB	1955	85	--	267
PV-3	PINE VALLEY BORO	394712N0745841.1	J R FERGUSON	--	1950	172	330	360
PV-4	PINE VALLEY BORO	394702N0745824.1	PINE VALLEY G C	GOLF CLUB 1-49	1949	170	310	370
RU-1	RUNNEMEDE BORO	395134N0750454.1	TRAP ROCK CO	2	1963	40	196	222
RU-2	RUNNEMEDE BORO	395133N0750455.1	TRAP ROCK IND	3	1968	40	195	215
RU-3	RUNNEMEDE BORO	395128N0750350.1	EASTERN RECORD	EASTERN 1	1963	40	250	260
RU-4	RUNNEMEDE BORO	395115N0750325.1	RED COACH INC	HIRST	1964	79	302	312
RU-5	RUNNEMEDE BORO	395056N0750417.1	NJ WATER CO	RUNNEMEDE 19	1958	67	301	338
RU-6	RUNNEMEDE BORO	395055N0750418.1	NJ WATER CO	RUNNEMEDE 7	1926	67	265	318
SO-1	SOMERDALE BORO	395041N0750053.1	NJ WATER CO	SOMERDALE 14	1956	105	389	441
TA-1	TAVISTOCK BORO	395237N0750122.1	TAVISTOCK CLUB	COUNTRY CLUB 1	1968	30	217	246
VO-1	VOORHEES TWP	395148N0745615.1	THOMAS DECAU	1	1957	115	127	147
VO-2	VOORHEES TWP	395129N0745906.1	NJ WATER CO	VOORHEES 21	1959	129	422	482
VO-3	VOORHEES TWP	395128N0745954.1	NJ WATER CO	ASHLAND TER 32	1966	70	--	459
VO-4	VOORHEES TWP	395128N0745954.2	NJ WATER CO	ASHLAND TER 9	1926	74	355	407
VO-5	VOORHEES TWP	395128N0745954.3	NJ WATER CO	ASHLAND TER 9R	1966	74	364	437
VO-6	VOORHEES TWP	395124N0745952.1	NJ WATER CO	ASHLAND 17	1958	100	379	421
VO-7	VOORHEES TWP	395109N0745715.1	RADIO CORP AMER	RCA	1955	175	220	234
VO-8	VOORHEES TWP	395107N0745854.1	R H DOBBS	--	1949	121	140	161
VO-9	VOORHEES TWP	395044N0745749.1	HAINES BLOCK CO	--	1955	118	--	160
VO-10	VOORHEES TWP	395015N0745528.1	CAMDEN LIME CO	3	--	155	--	255
VO-11	VOORHEES TWP	394954N0745530.1	CAMDEN LIME CO	1	1955	175	260	280
VO-12	VOORHEES TWP	394922N0745633.1	NJ WATER CO	ELM TREE 2	1963	148	1217	1227
VO-13	VOORHEES TWP	394922N0745633.2	NJ WATER CO	ELM TREE 3	1963	147	706	717
VO-14	VOORHEES TWP	394922N0745633.3	NJ WATER CO	ELM TREE 26	1960	150	237	275
WA-1	WATERFORD TWP	394651N0745421.1	AFCO DRIVE-IN	--	1955	170	65	76
WA-2	WATERFORD TWP	394645N0745146.1	CENTRAL SUPPLY	--	1955	121	78	83
WA-3	WATERFORD TWP	394620N0745403.1	GREEN ACRES MTL	MOTEL 1	1968	165	71	81
WA-4	WATERFORD TWP	394618N0745413.1	IVYSTONE W W	WATER WKS 2-62	1962	159	420	460
WA-5	WATERFORD TWP	394618N0745413.2	IVYSTONE W W	WATER WKS 3-65	1965	159	420	460
WA-6	WATERFORD TWP	394615N0745358.1	WILLIAM JULANO	--	1955	170	79	83
WA-7	WATERFORD TWP	394614N0745316.1	H W GSELL	--	1947	159	93	103
WA-8	WATERFORD TWP	394613N0745353.1	AL GIORDANO	1	1965	170	98	113
WA-9	WATERFORD TWP	394552N0744930.1	JOSEPH LANNI	--	1951	101	65	75
WA-10	WATERFORD TWP	394357N0745022.1	ALBERT PAGIA	--	1952	102	72	82
WA-11	WATERFORD TWP	394341N0745117.1	BRIDGE VIEW FAR	1	1966	120	110	130
WA-12	WATERFORD TWP	394243N0744932.1	EUGENE BRITTIN	--	1955	88	100	105

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLIDATED ROCK (FT)	CASING DIAMETER (IN)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAW DOWN (FT)	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
					CAMDEN COUNTY						
PE-11	35	--	26	12	7-32	1900	29	67.9	8	P	KJ MR
PE-12	35	--	26	14	7-32	1700	46	37.0	8	P	KJ MR
PE-13	25	--	12	80	7-67	1000	29	34.5	8	P	KJ MR
PE-14	30	135	36	11	11-50	1850	49	37.8	8	P	KJ MR
PE-15	30	--	26	13	10-30	1330	75	17.7	8	P	KJ MR
PE-16	35	--	18	20	10-30	1680	21	80.0	--	P	KJ MR
PE-17	48	--	26	14	5-24	1175	67	17.5	--	P	KJ MR
PE-18	22	--	26	20	10-24	1400	48	29.2	--	P	KJ MR
PE-19	20	--	3	56	12-51	--	--	--	--	N	KJ MR
PE-20	43	174	26	20	--24	1440	49	29.4	6	P	KJ MR
PE-21	48	--	26	18	5-24	1680	40	42.0	--	P	KJ MR
PE-22	11	--	6	--	11-50	75	--	--	--	H	KJ MR
PE-23	--	--	26	38	5-24	1000	--	--	--	P	KJ MR
PE-24	10	--	4	95	--51	25	--	--	2	H	KJ MR
PE-25	10	--	6	14	5-61	100	5	20.0	6	N	KJ MR
PE-26	--	--	3	6	12-50	--	--	--	--	U	KJ MR
PE-27	25	--	12	17	10-43	1000	27	37.0	8	P	KJ MR
PE-28	30	--	12	15	11-47	1005	23	43.7	8	P	KJ MR
PE-29	35	--	12	39	5-58	1034	37	27.9	8	P	KJ MR
PE-30	35	--	10	34	7-33	600	36	16.7	12	P	KJ MR
PE-31	50	--	12	5	1-40	720	20	36.0	24	P	KJ MR
PE-32	40	--	12	22	4--8	1005	53	19.0	8	P	KJ MR
PE-33	--	71	10	--	--	--	--	--	--	U	KJ MR
PE-34	26	--	18	54	4-55	900	8	112.5	--	P	KJ MR
PE-35	30	--	12	30	7-55	728	23	31.7	8	P	KJ MR
PE-36	30	--	12	53	4-68	862	15	58.8	8	P	KJ MR
PE-37	--	116	10	--	--	--	--	--	--	U	KJ MR
PE-38	9	--	--	--	--	--	--	--	--	U	KJ MR
PE-39	35	--	12	59	7-57	1020	39	26.2	8	P	KJ MR
PE-40	20	--	10	67	--	130	--	--	--	U	KJ MR
PE-41	35	--	12	90	10-62	1000	43	23.3	8	P	KJ MR
PE-42	20	--	6	45	-63	250	16	15.6	--	U	KJ MR
PE-43	30	--	12	43	5-65	900	25	36.0	8	P	KJ MR
PE-44	30	--	12	47	12-59	875	26	33.7	8	P	KJ MR
PE-45	20	--	6	40	9-63	400	23	17.4	8	U	KJ MR
PM-1	10	--	3	30	9-55	25	10	2.5	3	H	AA CP
PM-2	10	--	4	30	8-54	15	5	3.0	4	H	AA CP
PM-3	36	--	4	120	8-57	197	61	3.2	4	P	KJ MW
PM-4	55	--	8	22	3-60	100	58	1.7	10	P	AA CP
PM-5	10	--	4	132	11-49	40	18	2.2	8	H	KJ MW
PM-6	61	--	8	180	10-62	759	35	21.7	8	P	KJ MR
PM-7	20	--	--	126	5-71	--	--	--	--	T	KJ MW
PV-1	55	--	6	124	2-52	100	--	--	10	H	KJ MW
PV-2	--	--	10	40	10-55	200	--	--	8	P	KJ MW
PV-3	--	--	6	120	6-60	50	--	--	8	H	KJ MW
PV-4	50	--	4	110	9-49	125	20	6.2	8	H	KJ MW
RU-1	26	--	8	62	8-63	250	18	13.9	2	N	KJ MR
RU-2	10	--	4	80	12-58	100	20	5.0	1	H	KJ MR
RU-3	10	--	6	90	8-63	150	9	16.7	--	I	KJ MR
RU-4	10	--	3	120	3-64	70	5	14.0	--	H	KJ MR
RU-5	42	--	12	98	4-58	1900	61	31.1	8	P	KJ MR
RU-6	53	--	6	90	9-26	527	25	21.1	--	P	KJ MR
SO-1	52	--	10	115	8-56	709	76	9.3	8	P	KJ MR
TA-1	23	--	8	101	7-68	295	25	11.4	4	I	KJ MR
VO-1	20	--	4	45	9-57	300	45	6.7	6	I	KJ MW
VO-2	60	--	12	161	5-59	1012	30	33.7	8	P	KJ MR
VO-3	--	--	12	--	--	--	--	--	--	P	KJ MR
VO-4	50	--	12	94	--	1000	57	17.5	--	P	KJ MR
VO-5	40	--	8	136	5-66	709	22	32.2	8	P	KJ MR
VO-6	42	--	12	93	12-57	1016	38	26.7	8	P	KJ MR
VO-7	14	--	6	80	4-55	50	--	--	4	H	KJ MW
VO-8	21	--	6	38	12-49	100	--	--	10	H	KJ MW
VO-9	--	--	4	11	2-55	50	--	--	--	N	KJ MW
VO-10	--	--	4	81	3-70	--	--	--	--	U	KJ MW
VO-11	20	--	4	50	11-55	50	10	5.0	4	N	KJ MW
VO-12	10	1259	6	183	2-63	10	258	0.0	--	U	KJ MR
VO-13	11	--	6	190	2-63	15	--	--	--	U	KJ MR
VO-14	42	--	8	81	8-60	--	--	--	--	P	KJ MW
WA-1	11	--	6	45	6-55	63	8	7.5	5	N	AA CP
WA-2	5	--	4	45	3-55	45	5	9.0	1	H	AA CP
WA-3	10	--	4	20	10-68	70	10	7.0	1	H	AA CP
WA-4	40	--	10	135	5-62	535	155	3.5	48	P	KJ MW
WA-5	40	--	6	140	2-65	500	108	4.6	8	P	KJ MW
WA-6	5	--	4	18	5-55	30	7	4.3	4	H	AA CP
WA-7	10	--	--	31	12-47	8	--	--	--	H	AA CP
WA-8	--	--	4	--	--	--	--	--	--	I	AA CP
WA-9	10	--	6	6	8-51	50	--	--	6	H	AA CP
WA-10	10	--	3	22	11-52	40	6	6.7	4	H	AA CP
WA-11	20	--	4	8	4-66	60	1	60.0	2	I	AA CP
WA-12	5	--	6	42	8-55	50	12	4.2	6	H	AA CP

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			GLOUCESTER COUNTY					
WA-12	WASHINGTON TWP	394452N0750243.1	GINO'S REST	1	1970	150	278	310
WA-13	WASHINGTON TWP	394442N0750504.1	WALTER F EMOND	1	1968	150	220	244
WA-14	WASHINGTON TWP	394433N0750250.1	FRIES MILLS W C FMWC	1	1964	152	584	652
WA-15	WASHINGTON TWP	394423N0750157.1	C W GREENE	--	1954	150	57	67
WA-16	WASHINGTON TWP	394420N0750630.1	HARRY J DE SOI	1	1968	90	141	165
WA-17	WASHINGTON TWP	394309N0750155.1	JOSEPH BRYAN	--	1954	155	42	47
WE-1	WENONAH BORO	394751N0750912.1	WENONAH WATER D	WWD 2	1951	30	270	310
WE-2	WENONAH BORO	394743N0750902.1	WENONAH WATER D	WWD 1	1944	80	280	320
WD-1	WEST DEPTFORD TWP	395236N0750821.1	TEXAS OIL CO	EAGLE PT OBS 4	1948	10	214	224
WD-2	WEST DEPTFORD TWP	395232N0750942.1	TEXAS OIL CO	EAGLE PT OBS 3	1948	21	255	276
WD-3	WEST DEPTFORD TWP	395222N0750918.1	TEXAS OIL CO	EAGLE POINT 3	1947	20	258	288
WD-4	WEST DEPTFORD TWP	395221N0750856.1	TEXAS OIL CO	EAGLE POINT 5	1948	10	237	277
WD-5	WEST DEPTFORD TWP	395216N0750915.1	TEXAS OIL CO	EAGLE POINT 1	1947	32	248	288
WD-6	WEST DEPTFORD TWP	395213N0750936.1	TEXAS OIL CO	EAGLE POINT 4	1948	14	259	289
WD-7	WEST DEPTFORD TWP	395207N0750940.1	TEXAS OIL CO	EAGLE POINT 2	1948	17	263	289
WD-8	WEST DEPTFORD TWP	395159N0750907.1	TEXAS OIL CO	EAGLE PT OBS 1	1948	32	288	298
WD-9	WEST DEPTFORD TWP	395158N0750950.1	TEXAS OIL CO	EAGLE PT OBS 2	1948	10	285	295
WD-10	WEST DEPTFORD TWP	395153N0750940.1	TEXAS OIL CO	EAGLE POINT 6	1949	15	279	318
WD-11	WEST DEPTFORD TWP	394919N0751256.2	SHELL CHEM CO	SHELL 3	1962	30	358	384
WD-12	WEST DEPTFORD TWP	394917N0751307.1	SHELL CHEM CO	SHELL 1	1962	12	328	360
WS-1	WESTVILLE BORO	395221N0750737.1	WESTVILLE W D	WWD 4	1957	16	286	313
WS-2	WESTVILLE BORO	395221N0750737.2	WESTVILLE W D	WWD 3	1945	16	115	140
WB-1	WOODBURY CITY	394950N0750909.1	WOODBURY W D	RAILROAD 5	1960	35	405	457
			PHILADELPHIA COUNTY					
PH-1	PHILADELPHIA CITY	395538N0750843.1	CROWN PAPER BRO	1	1925	13	--	108
PH-2	PHILADELPHIA CITY	395536N0750905.1	S P DRESS BEEF	S PHILA BEEF 4	--	15	--	60
PH-3	PHILADELPHIA CITY	395534N0751106.1	GILBERT ADDEO	PRES THEATER	1936	30	65	86
PH-4	PHILADELPHIA CITY	395524N0750822.1	CONTINENTL DIST	CONT DIST R-7	1948	10	118	128
PH-5	PHILADELPHIA CITY	395511N0750833.1	WILSON-MARTIN	WILSON 1	1953	13	150	175
PH-6	PHILADELPHIA CITY	395448N0750856.1	TWIN PACKING CO	1	--	10	140	180
PH-7	PHILADELPHIA CITY	395428N0750804.1	PUBLICKER IND	P INDUSTRIES17	1937	8	159	169
PH-8	PHILADELPHIA CITY	395412N0751211.1	GULF OIL CORP	WEST WELL	1946	17	72	182
PH-9	PHILADELPHIA CITY	395342N0751021.1	U S NAVAL BASE	OBS WELL PH-12	1944	10	94	104
PH-10	PHILADELPHIA CITY	395329N0751012.1	U S NAVAL BASE	2	1940	10	207	232
PH-11	PHILADELPHIA CITY	395328N0751034.1	U S NAVAL BASE	4	1941	11	237	267
PH-12	PHILADELPHIA CITY	395328N0751028.1	U S NAVAL BASE	3	1941	12	238	268
PH-13	PHILADELPHIA CITY	395318N0750938.1	U S NAVAL BASE	9	1943	12	189	228
PH-14	PHILADELPHIA CITY	395316N0751049.1	U S NAVAL BASE	OBS WELL PH-20	1946	13	238	243
PH-15	PHILADELPHIA CITY	395316N0751031.1	U S NAVAL BASE	8	1944	12	200	230
PH-16	PHILADELPHIA CITY	395315N0751007.1	U S NAVAL BASE	11	1952	11	214	245

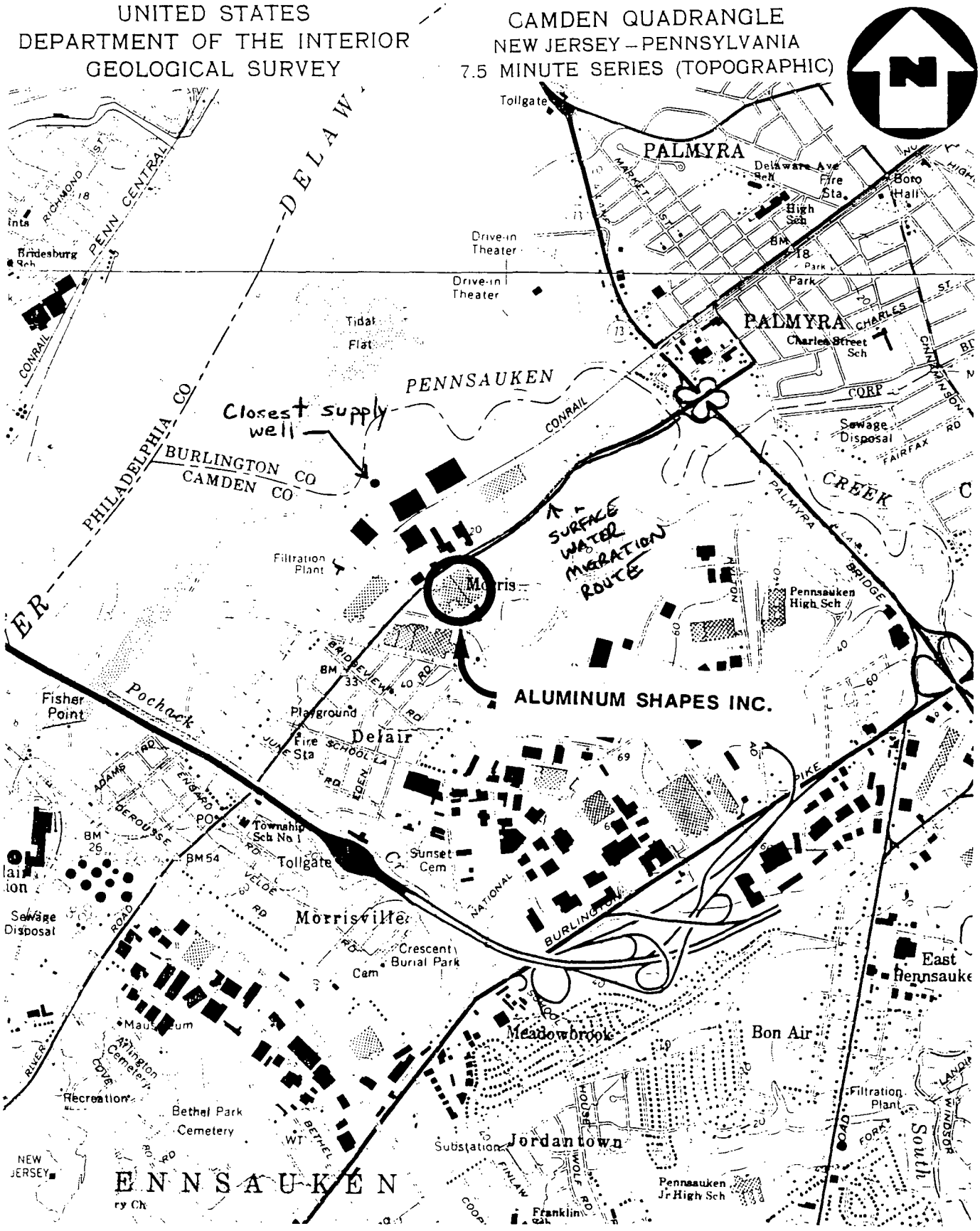
EXPLANATION

1. AQUIFER
   - WG WISSAHICKON FORMATION
   - K3RA RARITAN FORMATION
   - K3MR MAGOTHY-RARITAN FORMATIONS
   - K3MV MERCHANTVILLE FORMATION
   - K3ET ENGLISHTOWN FORMATION
   - K3MW MOUNT LAUREL SAND-WENONAH FORMATION
   - K3NA NAVESINK FORMATION
   - TLHT HORNERSTOWN SAND
   - TLVH VINCENTOWN FORMATION-HORNERSTOWN SAND
   - TSMV MANASQUAN-VINCENTOWN FORMATION
   - TEMA MANASQUAN FORMATION
   - TMKW KIRKWOOD FORMATION
   - TECS COHANSEY SAND
   - AACP PLEISTOCENE-COHANSEY SAND
   - TL TERTIARY-PALEOCENE
   - QGCM CAPE MAY FORMATION

2. WATER LEVEL BELOW LAND SURFACE
   - F FLOWS

3. WATER USE
   - A AIR CONDITION
   - C COMMERCIAL
   - H DOMESTIC
   - I IRRIGATION
   - N INDUSTRIAL
   - P PUBLIC SUPPLY
   - T INSTITUTIONAL
   - U UNUSED
   - Z OTHER

REFERENCE NO. 17



(QUAD) CAMDEN, N.J.-PA.

ALUMINUM SHAPES INC., DELAIR, N.J.

SCALE: 1" = 2000'

NUS CORPORATION

REFERENCE NO. 18

STATE OF NEW JERSEY

DEPARTMENT OF CONSERVATION

AND ECONOMIC DEVELOPMENT

DIVISION OF WATER POLICY

AND SUPPLY

UPPER CRETACEOUS SERIES

Raritan and Magothy Formations

Geology

The Raritan and Magothy Formations crop out in a belt 0.2 to 3.2 miles wide adjacent to the Delaware River and cover about 32 square miles of surface area in the county. The formations underlie the Delaware River and also crop out in Pennsylvania.

The Raritan and Magothy Formations are considered to be mostly of continental origin. They were deposited largely by the action of streams, although in a few localities at least part of these formations suggest a marine environment. The Raritan Formation is composed of light-colored quartzose sand, clay, and some gravel. The characteristic colors of the Raritan Formation are white, yellow, brown, red, and gray. The Magothy Formation consists of beds of dark-gray or black clay, commonly lignitic, alternating with white micaceous fine sand. In the county, the Raritan and Magothy Formations cannot be differentiated except locally because of similar lithology. The combined thickness of the Raritan and Magothy Formations in Gloucester County may be as much as 500 feet, and the formations thicken downdip toward Salem and Cumberland Counties.

The top of the Magothy Formation dips about 40 to 45 feet per mile to the southeast toward the Atlantic Ocean (fig. 3). The basal part of the Raritan Formation dips about 60 feet or more per mile. The Raritan and Magothy Formations rest unconformably on the Wissahickon Formation and in turn downdip from the outcrop area are overlain unconformably by the Merchantville Formation.

Hydrology

The undifferentiated Raritan and Magothy Formations contain the most important and productive aquifers in Gloucester County. The many industries adjacent to the Delaware River and most of the public water companies in the county obtain ground water from these formations. Wells tapping these formations yield up to 1,400 gpm (gallons per minute). The specific capacities of 85 wells range from 0.8 to 56 gpm per foot of drawdown and average 17 gpm per foot of drawdown. The water-bearing characteristics and thickness of the water-bearing zones (and aquicludes) in these formations vary greatly within short distances. The sand and gravel aquifers range in thickness from a few feet to 100 feet, although the total thickness of the formations may be much greater.

In the outcrop area two water-bearing zones are identified. The upper zone, usually artesian, includes the water-bearing beds in the upper 120

feet of the Raritan and Magothy Formations. Locally, where the upper zone is unconfined and hydraulically connected with the shallow water-table aquifer in the Cape May Formation, the total thickness of the water-bearing zone may be as much as 140 feet. The lower zone is always artesian in Gloucester County and is composed of the water-bearing beds in the lower 200 feet of the formations. Available well data indicate that the upper and lower aquifers are separated by clay beds in the outcrop area but their identification elsewhere in the county is uncertain. However, where the two water-bearing zones can be differentiated, their hydrologic properties are separately described.

In the Paulsboro-Gibbstown area, wells tapping the upper water-bearing zone yield from 180 to 1,400 gpm. E. I. du Pont de Nemours & Co., Hercules Powder Co., Mobil Oil Co., the Borough of Paulsboro, and Greenwich Township Water Department have wells which obtain water from this zone of the Raritan and Magothy Formations. In the National Park-Westville area some wells yield as much as 800 gpm from this upper zone. Wells in the Paulsboro-Gibbstown area tapping the lower water-bearing zone yield from 150 to 1,100 gpm. Most of the wells in the National Park-Westville area are developed in the basal part of the lower zone and yields of wells range from 250 to 1,200 gpm.

In the central and southern parts of the county, wells obtain water from the upper part of the Raritan and Magothy Formations. In the Pitman and Glassboro area, wells yield from 500 to 1,000 gpm. At Clayton one well yields about 700 gpm. The upper water-bearing zone has been tapped by wells at Swedesboro, Wenonah, Mantua, Woodbury, Mullica Hill, and Clarksboro. The lower water-bearing zone has not been developed extensively in the central and southwestern parts of the county because abundant water is available at shallower depths. Water from this zone is probably brackish in the southeastern fifth of the county.

Several pumping tests were made in various parts of the county to determine the hydraulic characteristics of the aquifers. In the National Park area, the coefficient of transmissibility of the lower water-bearing zone is 42,000 gpd per ft and in the upper zone 52,000 gpd per ft. At Gibbstown, the upper zone has a coefficient of transmissibility of 50,000 gpd per ft, and at Clayton, 16 miles downdip, the coefficient is 30,000 gpd per ft. The average coefficient of permeability of the aquifers in the Raritan and Magothy Formations is about 1,000 gpd per sq ft.

A pumping test at the Eagle Point refinery of the Texas Oil Co. near Westville indicated coefficients of transmissibility ranging from 51,000 to 68,000 gpd per ft, coefficients of storage ranging from 1.7×10^{-4} to 9.0×10^{-5}, and permeabilities ranging from 1,000 to 1,400 gpd per sq ft.

REFERENCE NO. 19

ERP No. D-MMS-A02224-00. Rating EO2, 1989 Central and Western Planning Areas Gulf of Mexico Outer Continental Shelf (OCS) Oil and Gas Sales No. 118 and 122, Lease Offerings offshore the coast of Alabama, Mississippi, Louisiana and Texas.

Summary

EPA expressed objections to the proposed action of unrestricted leasing in the Central and Western Gulf. EPA also expressed concern over the lack of any proposed mitigation for possible impacts to deep-water benthic communities. EPA also expressed concern that ozone modeling of the effect of offshore emission on onshore air quality be conducted.

ERP No. D-NPS-K61095-NV. Rating LO, Death Valley National Monument, General Management Plan, Implementation, Inyo and San Bernardino Counties, CA and Nye and Esmeralda Counties, NV.

Summary

EPA expressed a lack of objections to the proposed management plan but noted that future multiple use activities (mining, campgrounds) will require an assessment of air quality, surface water and ground water impacts.

Final EISs

ERP No. F-COE-H30000-IA, Des Moines Recreational River and Greenbelt Area, Development, Operation and Maintenance, Des Moines River, Webster, Hamilton, Boone, Dallas, Polk, and Warren Counties, IA.

Summary

EPA has no objections to this project with the understanding that each unit of the project will be evaluated separately for NEPA compliance at a later date.

ERP No. F-FHW-F40290-WI, WI-TH-83 Improvement, I-94 to Cardinal Lane/WI-TH-16, Funding and 404 Permit, Waukesha County, WI.

Summary

EPA has no objection to this project, long as a minimum of 0.8 acre of additional wetlands are created.

(Note: The above summary should have appeared in the 6-10-88 Federal Register Notice.)

ERP No. F-USN-C85041-NJ, Colts Neck, Naval Weapons Station Earle Family Housing Development, Construction, Mammouth County, NJ.

Summary

EPA's concern regarding the location of the mitigation site has been addressed in this document. In addition, information within the document clarified our questions with respect to the delineation of wetlands, and the point of discharge of the wastewater treatment plant. Accordingly, EPA has no unresolved concerns regarding the implementation of the project as proposed.

ERP No. F-USN-D84005-VA, Empress II Operation, Electromagnetic Pulse, Radiation Environment Simulator for Ships, Chesapeake Bay (West of Bloodsworth Island) and Atlantic Ocean (Virginia Capes Operating Area), off the Coast of VA.

Summary

EPA expressed a preference for the proposed site and requested a thorough monitoring program for the project.

(Note: The above summary should have appeared in the 6-17-88 Federal Register Notice.)

Dated: June 21, 1988.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 88-14353 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[ER-FRL-3404-3]

Environmental Impact Statements; Availability; Weekly Receipts

Responsible Agency: Office of Federal Activities, General Information (202) 382-5073 or (202) 382-5075. Availability of Environmental Impact Statements, Filed June 13, 1988 Through June 17, 1988, Pursuant to 40 CFR 1506.9.

EIS No. 880189, Draft, BLM, AZ, San Pedro River Riparian Resource Management Plan, Implementation, San Simon Resource Area, Safford District, Cochise County, AZ, Due: September 21, 1988, Contact: Jerrold Coolidge (602) 428-4040.

EIS No. 880190, Draft, DOE, ND, Charlie Creek-Belfield 345 kV Transmission Line Project, Construction, Operation and Maintenance, Implementation, Billings, Stark, McKenzie and Dunn Counties, ND, Due: August 8, 1988, Contact: James D. Davis (406) 657-5525.

EIS No. 880191, Draft, SCS, MD, East Yellow Creek Watershed, Soil Erosion and Flood Damage Reduction Plan, Funding and Implementation, Sullivan, Linn and Chariton Counties, MO, Due: August 8, 1988, Contact: Russell C. Mills (314) 875-5214.

EIS No. 880192, Draft, NPS, AK, Denali National Park and Preserve, Wilderness Recommendations, Designation or Nondesignation, AK, Due: August 29, 1988, Contact: Linda Nebel (907) 257-2654.

EIS No. 880193, Draft, AFS, WY, Little Bighorn River, Wild and Scenic River Study, National Wild and Scenic Rivers System, Designation, Bighorn National Forest, Sheridan County, WY, Due: September 22, 1988, Contact: Arthur Bauer (307) 672-0751.

EIS No. 880194, Draft, USN, PA, U.S. Navy Girard Point Site, Sale to the Philadelphia Muncipal Authority for the Establishment of a Steam Generation Facility that Produces Steam for Purchase by the U.S. Navy, City of Philadelphia, PA, Due: August 12, 1988, Contact: Kenneth Petrone (215) 897-6431.

EIS No. 880195, Final, FHW, PA, PA-23/New Holland Avenue/LR-1124, Section 801 Relocation, US 30 to Walnut and Chestnut Streets, Funding and 404 Permit, Manheim, East Lampeter and Lancaster Townships and the City of Lancaster, Lancaster County, PA, Due: July 25, 1988, Contact: Phflibert A. Quellet (717) 782-4422.

EIS No. 880196, Draft, FRC, REG, Regulations Governing Independent Power Producers (RM88-4-000) and Regulations Governing Bidding Programs (RM88-5-000), Implementation, Due: August 15, 1988, Contact: Gilda Rodriquez (202) 357-9155.

EIS No. 880197, Draft, SCS, MS, Whites Creek, Watershed Protection and Flood Prevention Plan, Funding, Possible 404 Permit and Implementation, Webster County, MS, Due: August 8, 1988, Contact: L. Peter Heard (601) 965-5205.

EIS No. 880198, Draft, EPA, FL, CF Mining Complex II, Open Pit Phosphate Mine and Beneficiation Plan, Construction and Operation, NPDES and 404 Permits, Hardee County, FL, Due: August 8, 1988, Contact: Maryann Gerber (404) 347-3776.

Dated: June 21, 1988.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 88-14352 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[FRL-3340-F]

New Jersey Coastal Plain Aquifer System, New Jersey Sole Source Aquifer Final Determination

AGENCY: U.S. Environmental Protection Agency.

ACTION: Notice.

SUMMARY: Notice is hereby given that, pursuant to section 1424(e) of the Safe Drinking Water Act, the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the

New Jersey Coastal Plain Aquifer System, underlying the New Jersey Coastal Plan Area, is the sole or principal source of drinking water for the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey, and that the acquifer, if contaminated, would create a significant hazard to public health. As a result of this action EPA will review Federally-assisted projects (projects which receive Federal financial assistance through a grant, contract, loan guarantee, or otherwise) proposed for construction in a project review area which includes the New Jersey Coastal Plain Area and a portion of the aquifer streamflow source zone. The streamflow source zone includes upstream portions of the Delaware River Basin in the States of Delaware, New Jersey, New York and Pennsylvania. Federally-assisted projects will be reviewed to ensure that they are designed and constructed so that they do not create a significant hazard to public health. Projects outside of the project review area but within the streamflow source zone will be reviewed if they require an Environmental Impact Statement (EIS).

DATES: This determination shall be promulgated for purposes of judicial review at 1:00 P.M. Eastern Time on July 7, 1988. This determination shall become effective on August 8, 1988.

ADDRESSES: The data on which these findings are based, detailed maps of the New Jersey Coastal Plain Area and the project review area, a compilation of public comments and the Agency's response to those comments, are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Water Management Division, 26 Federal Plaza, New York, New York 10278. In addition, copies of a map showing the designated area and a responsiveness summary to public comment are available upon request.

FOR FURTHER INFORMATION CONTACT: John Malleck, Chief, Office of Ground Water Management, Water Management Division, 26 Federal Plaza, New York, New York 10278 (212) 264-5635.

SUPPLEMENTARY INFORMATION: Notice is hereby given that pursuant to section 1424(e) of the Safe Drinking Water Act (42 U.S.C., 300f, 300h-3(e), Pub. L. 93-523), the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the New Jersey Coastal Plain Aquifer System, underlying the New Jersey Coastal Plain Area, is the sole or principal source of drinking water for the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey. Pursuant to section 1424(e), Federally-assisted projects proposed for construction in the New Jersey Coastal Plain Area and the project review area within portions of its streamflow source zone will be subject to EPA review. The streamflow source zone for the New Jersey Coastal Plain Aquifer System includes upstream portions of the Delaware River Basin in the States of Delaware (New Castle County), New Jersey (Mercer-part, Hunterdon-part, Sussex-part, and Warren Counties), New York (Delaware, Orange, Sullivan and Ulster Counties), and Pennsylvania (Berks-part, Bucks, Carbon-part, Chester-part, Delaware, Lackawanna-part, Lancaster, Lehigh, Luzerne-part, Monroe Montgomery, Northampton, Philadelphia, Pike, Schuykill and Wayne Counties). The project review area includes that portion of the streamflow source zone which lies within two miles of the Delaware River in the States of New Jersey (in Mercer, Hunterdon, Sussex and Warren Counties), Delaware (in New Castle County), Pennsylvania (in Delaware, Philadelphia, Bucks, Monroe, Northampton, Pike and Wayne Counties) and New York (in Delaware, Orange and Sullivan Counties).

I. Background

Section 1424(e) of the Safe Drinking Water Act states: (e) If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to a plan or design the project to assure that it will not so contaminate the aquifer.

On December 4, 1978 the Environmental Defense Fund, Inc. and the Sierra Club New Jersey Chapter petitioned the EPA Administrator to determine that the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey, constitute an area whose aquifer system is "the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health." On March 21, 1979, EPA published the petition in the Federal Register. Public hearings on the petition request were held May 1, 15 and 17, 1979 in Lindenwold, Trenton, Freehold and Pomona, New Jersey. A May 19, 1983 Federal Register notice announced the availability of additional technical information and the extension of public comment period to July 15, 1983.

II. Basis for Determination

Among the factors to be considered by the Administrator in connection with the designation of an area under section 1424(e) are:

(1) Whether the aquifer is the area's sole or principal source of drinking water and (2) whether contamination of the aquifer would create a significant hazard to public health.

On the basis of information available to this Agency, the Administrator has made the following findings, which are the basis for the determination noted above:

(1) The New Jersey Coastal Plain Area depends upon the underlying Coastal Plain Aquifer System for seventy-five (75) per cent or more of its drinking water to serve 3 million people.

(2) Data show that the formations of the New Jersey Coastal Plain Area are hydrologically interconnected such that they respond collectively as an interrelated aquifer system.

(3) If the aquifer system were to become contaminated, exposure of the persons served by the system would constitute a significant hazard to public health.

(4) Alternative supplies capable of providing fifty (50) per cent or more of the drinking water to the designated area are not available at similar economic costs.

The New Jersey Coastal Plain Aquifer System is highly susceptible to contamination through its recharge zone from a number of sources, including but not limited to, chemical spills, leachate from landfills, stormwater runoff, highway de-icing, faulty septic systems wastewater treatment systems and waste disposal lagoons. The aquifer is also susceptible to contamination to a lesser degree from the same sources, through its streamflow source zone. Since ground-water contamination can be difficult or impossible to reverse

completely and since the acquifer in this area is solely or principally relied upon for drinking water purposes by the population of the New Jersey Coastal Plain Area, contamination of the aquifer could pose a significant hazard to public health.

III. Description of the New Jersey Coastal Plain Area Aquifer System, Its Recharge Zone and Its Streamflow Source Zone

The New Jersey Coastal Plain Aquifer System consists of a wedge-shaped mass of unconsolidated sediments composed of clay, silt, sand and gravel. The wedge thins to a feathered edge along the Fall Line and attains a thickness of over 6,000 feet at the tip of Cape May County, New Jersey.

These sediments range in age from Cretaceous to Holocene and can be classified as continental, coastal or marine deposits. There are five major aquifers within the Coastal Plain Aquifer System. They are the Potomac-Raritan-Magothy Aquifer System, Englishtown Aquifer, Wenonah-Mount Laurel Aquifer, Kirkwood Aquifer and the Cohansey Aquifer. Natural recharge to the New Jersey Coastal Plain Aquifer System occurs primarily through direct precipitation on the outcrop area of the geologic formations. A smaller component of natural recharge to the deeper layers of the system occurs by vertical leakage from the upper layers. This accounts for a small percentage of the total amount of recharge; however, over a large area and a long period of time the amount of water transmitted can be significant.

The New Jersey Coastal Plain Aquifer discharges to the surface through streams, springs and evapotranspiration. Many streams ultimately flow into bays or directly into the ocean. Development of the ground-water reservoir as a water supply source constitutes another discharge component which today accounts for a significant portion of discharge from the overall system. In certain areas (e.g. along the Delaware River) heavy pumping has caused a reversal in the normal discharge from the aquifer (Raritan-Magothy) such that the surface stream (Delaware River) now recharges the aquifer. This phenomenon implies that, in addition to the New Jersey Coastal Plain Area, the Delaware River Basin within Delaware, New Jersey, Pennsylvania and New York must be regarded as a streamflow source zone (an upstream headwaters area which drains into a recharge zone), which flows into the Coastal Plain Area.

IV. Information Utilized in Determination

The information utilized in this determination includes the petition, written and verbal comments submitted by the public, and various technical publications. The above data are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Region II, Water Management Division, 26 Federal Plaza, New York, New York 10278.

V. Project Review

When the EPA Administrator publishes his determination for a sole or principal drinking water source, no commitment for Federal financial assistance may be may if the Administrator finds that the Federally-assisted project may contaminate the aquifer through a recharge zone so as to create a significant hazard to public health . . . Safe Drinking Water Act section 1424(e), 42 U.S.C. 300h–3(e). In many cases, these Federally-assisted projects would also be analyzed in an "Environmental Impact Statement" (EIS) under the National Environmental Policy Act (NEPA), 42 U.S.C. 4332(2)(C). All EISs, as well as any other proposed Federal actions affecting an EPA program or responsibility, are required by Federal law (under the so-called "NEPA/309" process) [1] to be reviewed and commented upon by the EPA Administrator. Therefore, in order to streamline EPA's review of the possible environmental impacts on designated aquifers, when an action is analyzed in an EIS, the two reviews will be consolidated, and both authorities will be cited. The EPA review (under the Safe Drinking Water Act) of Federally-assisted projects potentially affecting sole or principal source aquifers, will be included in the EPA review (under the "NEPA/309" process) of any EIS accompanying the same Federally-assisted project. The letter transmitting EPA's comments on the final EIS to the lead agency will be the vehicle for informing the lead agency of EPA's actions under section 1424(e).

All Federally-assisted proposed projects will be reviewed, within the New Jersey Coastal Plain Area (Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland and Cape May, and portions of Mercer and Middlesex Counties, New Jersey (as delineated on maps included in the petition), and that portion of the streamflow source zone which lies within two miles of the Delaware River in the States of New Jersey (in Mercer, Hunterdon, Sussex and Warren Counties), Delaware (in New Castle County), Pennsylvania (in Delaware, Philadelphia, Bucks, Monroe, Northampton, Pike and Wayne Counties) and New York (in Delaware, Orange and Sullivan Counties) (as delineated on maps included in the public record). Outside the New Jersey Coastal Plain Area and further than two miles from the Delaware River in the streamflow source zone, only those Federally-assisted proposed projects requiring the preparation of an EIS will be reviewed. The Agency has chosen a two-mile limit for the project review area along the Delaware River based on the climate and hydrologic setting of the area. The two-mile distance is consistent with the two-mile review radius included in the EPA guidelines for Ground-Water Classification and is protective of human health.

VI. Summary and Discussion of Public Comments

There has been much controversy over the possible designation of this aquifer system. The majority of the comments from the original 1979 public hearings were in direct opposition to such a designation. More than half of all responses received were against designation. Several commenters felt constrained by the original comment period and thereby requested an extension. EPA complied with this request on two occasions, once by announcing at the four public hearings it held throughout the area under consideration that the agency had extended the formal comment period from May 14, 1979, to December 31, 1979, and again in a May 19, 1983 Federal Register Notice that announced the availability of additional information and extension of the public comment period to July 15, 1983. Although a number of ground-water protection measures are available at the Federal, State and local level, none of these, either individually or collectively, permit EPA to act as directly as would a sole source aquifer designation in the review and approval of Federally-assisted projects. In addition, EPA feels that the sole source project review process will foster integration rather than duplication of environmental review efforts. Memoranda of Understanding have been negotiated with various Federal agencies with the purpose of streamlining the review process and minimizing project delays. Most of the commenters expressed concern that a

[1] 42 U.S.C. § 7609 requires EPA to conduct this review. The "309" in a "NEPA/309" derives from the original source of this general requirement: Section 309 of the Clean Air Act.

designation would be a duplication of efforts already existing on the state and local levels. Some commenters felt that a sole source aquifer designation would give EPA the power to reject any applications for Federally-funded projects indiscriminately and to delay any project underway. Another main concern of many commenters was that a designation would cause a strong negative economic impact on the area in question and curtail needed development, thus eliminating jobs. EPA is sympathetic to the concerns of the commenters; however, the Agency feels that a sole source aquifer designation would not interfere with economic development. Federal financial assistance will be withheld only in those instances where it is determined that a proposed project may contaminate the aquifer so as to create a significant hazard to public health and no acceptable remedial measures are available to prevent the potential hazard.

Dated: June 16, 1988.

Lee M. Thomas,

Administrator.

[FR Doc. 88-14293 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[OPTS-59845; FRL-3404-5]

Toxic and Hazardous Substances; Certain Chemicals Premanufacture Notices

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Section 5(a)(1) of the Toxic Substances Control Act (TSCA) requires any person who intends to manufacture or import a new chemical substance to submit a premanufacture notice (PMN) to EPA at least 90 days before manufacture or import commences. Statutory requirements for section 5(a)(1) premanufacture notices are discussed in the final rule published in the Federal Register of May 13, 1983 (48 FR 21722). In the Federal Register of November 12, 1984 (49 FR 46066) (40 CFR 723.250), EPA published a rule which granted a limited exemption from certain PMN requirements for certain types of polymers. Notices for such polymers are reviewed by EPA within 21 days of receipt. This notice announces receipt of nine such PMNs and provides a summary of each.

DATES: Close of Review Periods:

Y 88-192, 88-193—June 5, 1988.
Y 88-194—June 7, 1988.
Y 88-195—May 17, 1988.
Y 88-196—June 8, 1988.
Y 88-197—June 14, 1988.
Y 88-198—June 16, 1988.
Y 88-199—June 10, 1988.
Y 88-200—June 23, 1988.

FOR FURTHER INFORMATION CONTACT: Stephanie Roan, Premanufacture Notice Management Branch, Chemical Control Division (TS-794), Office of Toxic Substances, Environmental Protection Agency, Rm. E-611, 401 M Street SW., Washington, DC 20460 (202) 382-3725.

SUPPLEMENTARY INFORMATION: The following notice contains information extracted from the non-confidential version of the submission provided by the manufacturer on the PMNs received by EPA. The complete non-confidential document is available in the Public Reading Room NE-G004 at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding legal holidays.

Y 88-192

Manufacturer. Confidential.
Chemical. (G) Hydroxy function acrylic resin.
Use/Production. (S) Coatings. Prod. range: Confidential.

Y 88-193

Manufacturer. Confidential.
Chemical. (G) Polyurethane resin.
Use/Production. (S) Coating. Prod. range: Confidential.

Y 88-194

Manufacturer. Sybron Chemicals Inc.
Chemical. (G) Copolymer of aliphatic esters of 2-propenoic acid with homocyclic and heterocyclic aromatic vinyl compounds, reaction production wiyh aliphatic polyam ne.
Use/Production. (G) Waste and process water purification. Prod. range: Confidential.

Y 88-195

Manufacturer. Confidential.
Chemical. (G) Dibasic acid polyol polyester.
Use/Production. (G) Used in coatings. Prod. range: Confidential.

Y 88-196

Manufacturer. Confidential.
Chemical. (S) Rosin, dicyclopentadiene, dimer fatty acid polymer.
Use/Production. (S) Printing ink vehicles. Prod. range: 3,000,000-3,700,000 kg/yr.

Y 88-197

Manufacturer. Reichhold Chemicals Inc.
Chemical. (G) Sunflower oil alkyd.
Use/Production. (S) Architectural trade sales coating. Prod. range: Confidential.

Y 88-198

Manufacturer. Confidential.
Chemical. (G) Aliphatic polyester urethane.
Use/Production. (G) Coatings. Prod. range: Confidential.

Y 88-199

Manufacturer. C.J. Osborn.
Chemical. (G) Polyester.
Use/Production. (S) Pigmented and clear finish. Prod. range: Confidential.

Y 88-200

Manufacturer. Confidential.
Chemical. (G) Styrene/acrylic copolymer.
Use/Production. Coatings and inks. Prod. range: Confidential.

Date: June 13, 1988.

Steve Newburg-Rinn,

Acting Chief, Public Data Branch, Information Management Division, Office of Toxic Substances.

[FR Doc. 88-14292 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

Public Information Collection Requirement Submitted to Office of Management and Budget for Review

June 16, 1988.

The Federal Communications Commission has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1980 (44 U.S.C. 3507).

Copies of this submission may be purchased from the Commission's copy contractor, International Transcription Service, (202) 857-3800, 2100 M Street NW., Suite 140, Washington, DC 20037. For further information on this submission contact Judy Boley, Federal Communications Commission, (202) 632-7513. Persons wishing to comment on this information collection should contact Yvette Flynn, Office of Management and Budget, Room 3235 NEOB, Washington, DC 20503, (202) 395-3785.

OMB Number: 3060-0025.
Title: Application for Restricted Radiotelephone Operator Permit—Limited Use.
Form Number: FCC 755.
Action: Revision.
Respondents: Individuals or households.

REFERENCE NO. 20

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual

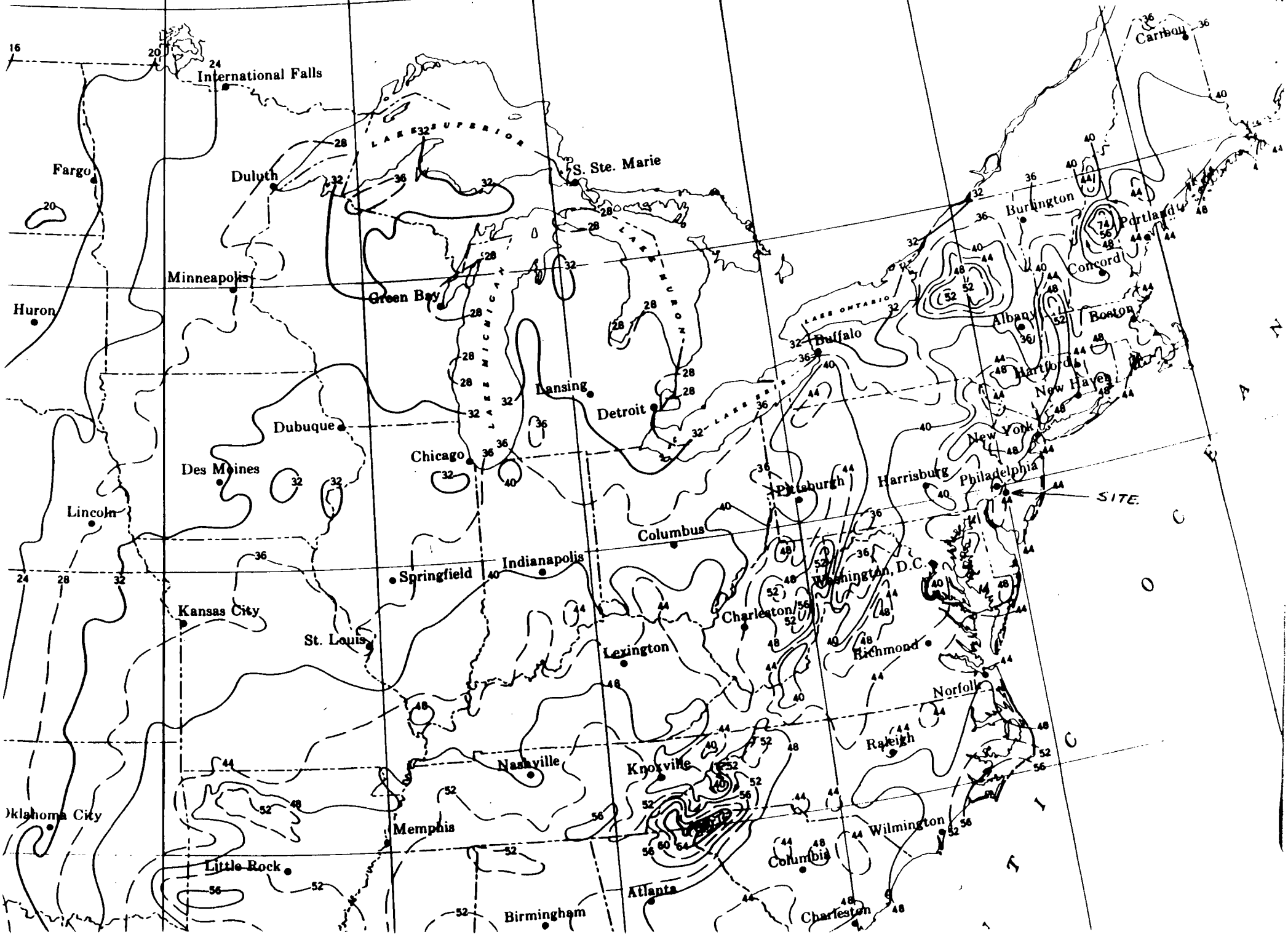
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984

NORMAL ANNUAL TOTAL PRECIPITATION (Inches)



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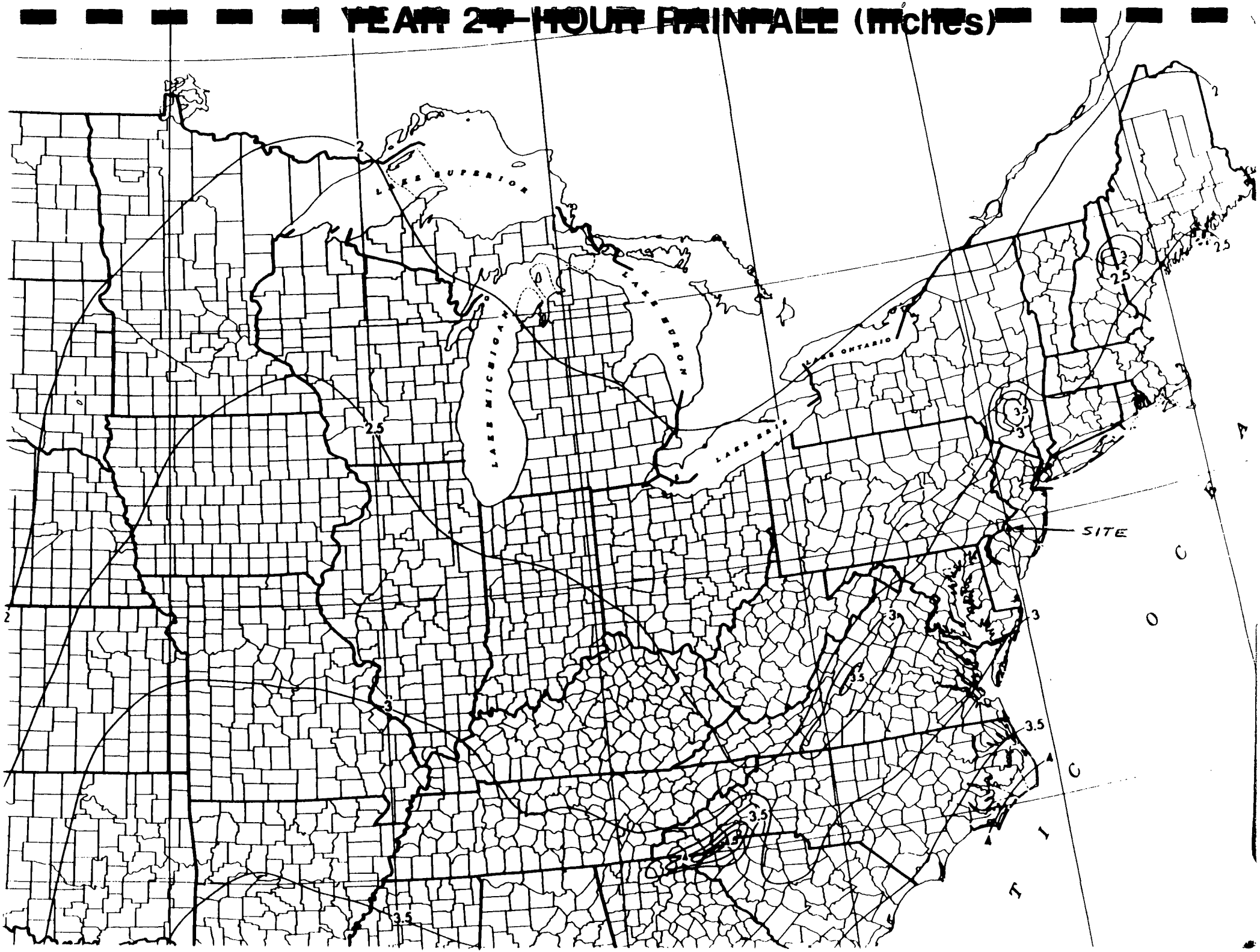
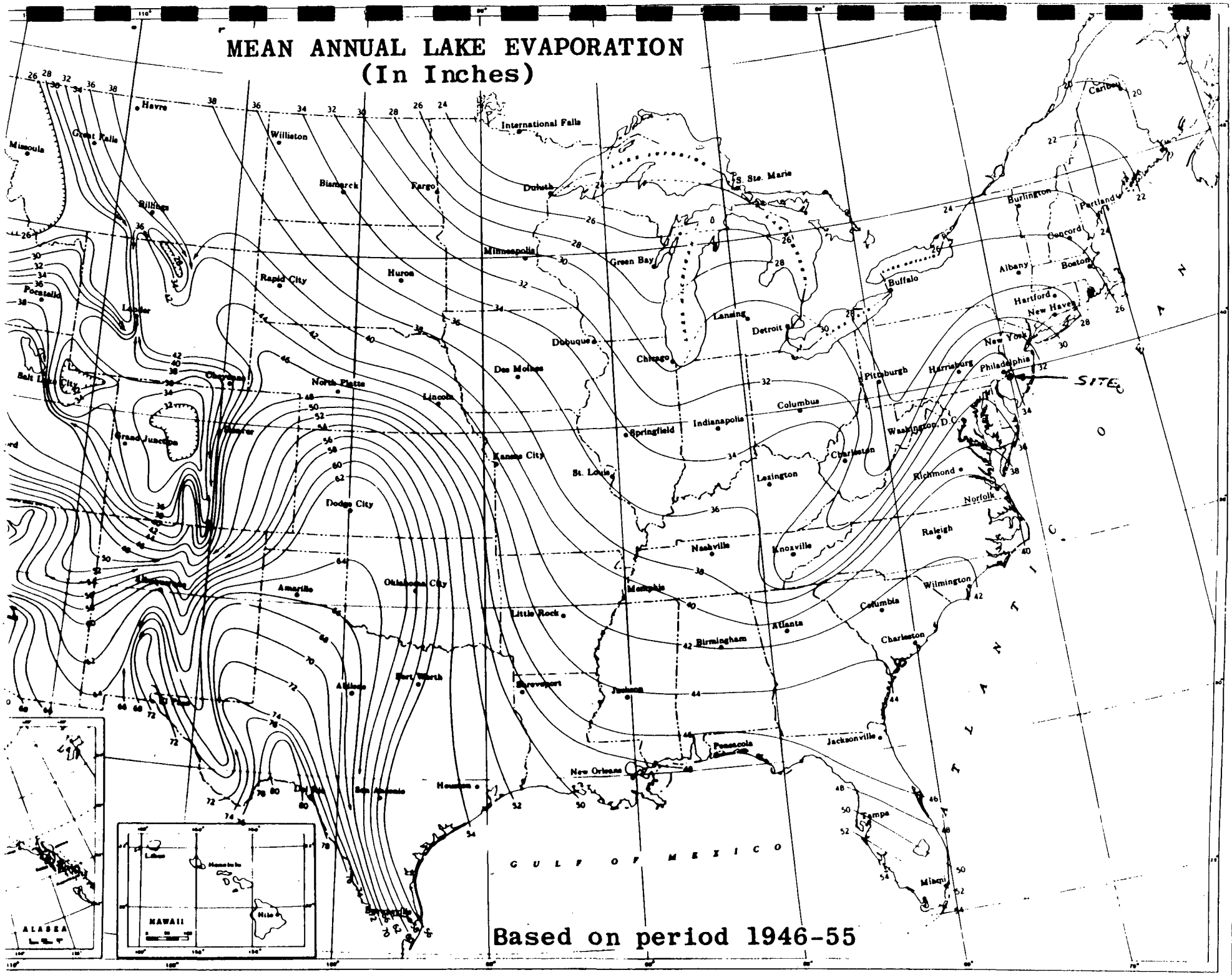


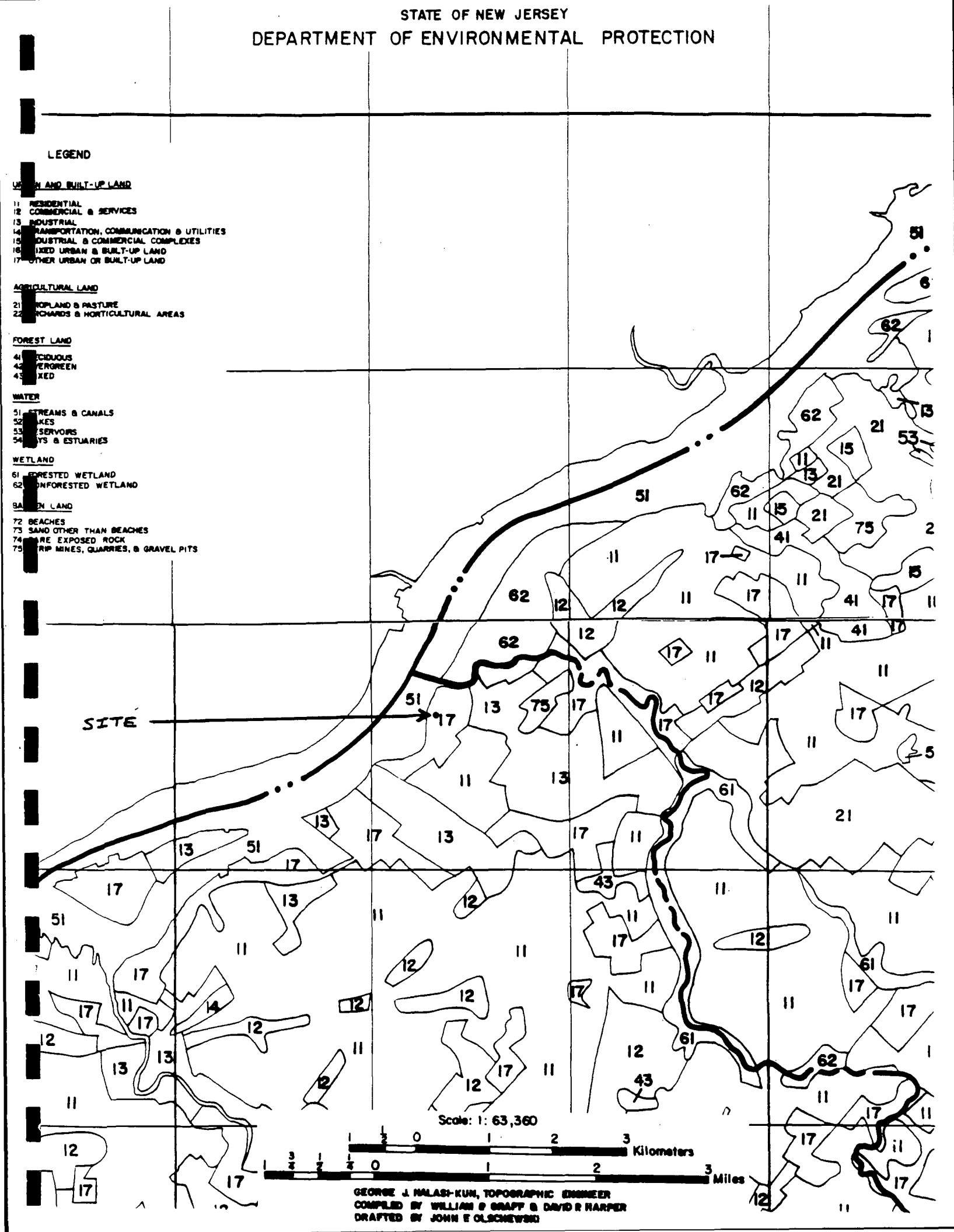
MEAN ANNUAL LAKE EVAPORATION
(In Inches)



REFERENCE NO. 21

STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION



GEORGE J. HALASI-KUN, TOPOGRAPHIC ENGINEER
COMPILED BY WILLIAM P. GRAFF & DAVID R. HARPER
DRAFTED BY JOHN E. OLSCHEWSKI

REFERENCE NO. 22

United States Department of the Interior

FISH AND WILDLIFE SERVICE

P.O. Box 534
705 White Horse Pike
Absecon, New Jersey 08201
(609) 646-9310

February 7, 1989

Ms. Valerie Mathers
NUS Corporation
1090 King Georges Post Road, Suite 100
Edison, New Jersey 08837

Dear Ms. Mathers:

This letter is in response to your January 13, 1989 request to the Fish and Wildlife Service (Service) for information on the presence of federally listed endangered or threatened species within a two-mile radius of 16 potentially hazardous waste sites in Camden County, New Jersey.

This response is provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) to ensure the protection of endangered and threatened species and does not address other Service concerns for fish and wildlife resources. If these sites are formally ranked on the National Priority List we recommend that future work plans for the sites be reviewed by the Biological Technical Assistance Group, an interagency technical assistance forum for project managers set up by the U.S. Environmental Protection Agency (Region II). Furthermore, if remedial actions are required at these sites, we recommend that the Environmental Impacts Branch be coordinated with to ensure that all "applicable or relevant and appropriate requirements" (ARARs) are complied with in the implementation of cleanup activities, including the Fish and Wildlife Coordination Act (48 Stat. 401, 16 U.S.C. 661 et seq.), the River and Harbor Act of 1889 (33 U.S.C. 401,403), and the Clean Water Act of 1977 (U.S.C. 1344 et seq.).

Except for occasional transient species, no federally listed or proposed threatened or endangered species are known to occur within a two-mile radius of the following sites:

Aluminum Shapes Inc.
Delair, New Jersey

Borden Chemical Printing Ink
Camden, New Jersey

Campbell Soup Company
(both locations)
Camden, New Jersey

CITGO Petroleum Corp.
Petty's Island, New Jersey

G&W Natural Resources Group
Gloucester City, New Jersey

GAF Corporation
Gloucester City, New Jersey

Georgia Pacific Corp. Gypsum Div.
Delair, New Jersey

Grow Group Inc.
Pennsauken, New Jersey

Clement "Coverall" Co.
Camden, New Jersey

Elco Corp. Varicircuits Div.
Pennsauken, New Jersey

United Steel and Wire Co., Inc.
Pennsauken, New Jersey

Kelbros Inc.
Camden, New Jersey

Kramer Chemicals Inc.
Camden, New Jersey

S W Electronics and Mfr. Corp.
Cherry Hill, New Jersey

If additional information on listed or proposed species becomes available or if a significant time elapses before project activities are undertaken, this determination may be reconsidered.

The Dynasil Corporation of America site, located on Cooper Road in Berlin, New Jersey occurs within a two-mile radius of a known occurrence of swamp pink (Helonias bullata), a threatened species. This occurrence is located in Evesham Township, Burlington County. Without a description of any remedial actions proposed for the site, the Service is unable to assess any impacts, if any, which may occur to this plant species. When such information becomes available, you may wish to contact this office again.

In addition to species of federal concern, species listed by the State of New Jersey may occur within the study areas. To confirm the presence of these species, please contact the following offices:

Mr. Thomas Breden
Natural Heritage Program
Division of Parks and Forestry
CN 404
Trenton, New Jersey 08625
(609/984-0097)

Ms. JoAnn Frier-Murza
Endangered and Nongame Species Program
CN 400
Trenton, New Jersey 08625
(609/292-9101)

Information contained in this letter and additional information obtained from the aforementioned State sources represents the public interest for fish and wildlife resources and should warrant full consideration in the preparation of the Preliminary Assessments. The Service requests that no part of this letter be taken out of context and if reproduced, the letter should appear in its entirety.

A compilation of federally designated endangered and threatened species in New Jersey is enclosed for your information. Please contact Lynn Wilson of my staff should you have any questions or require further assistance.

Sincerely,

Clifford G. Day
Supervisor

Enclosure

REFERENCE NO. 23

PRELIMINARY ASSESSMENT
OFF SITE RECONNAISSANCE
INFORMATION REPORTING FORM

Date: February 7, 1989

Site Name: Aluminum Shapes, Inc TDD: 02-8901-16

Site Address: 9000 River Road
Street, Box, etc.

Delair
Town

Camden
County

New Jersey
State

NUS Personnel:	Name	Discipline
	Brian Dietz	Biologist
	Ed Knyfd	Geologist

Weather Conditions (clear, cloudy, rain, snow, etc.):

sunny & clear

Estimated wind direction and wind speed: no wind

Estimated temperature: 35°F

Signature: Brian Dietz Date: 2/7/89

Countersigned: Edmund Knyfel Jr. Date: 2-7-89

PRELIMINARY ASSESSMENT

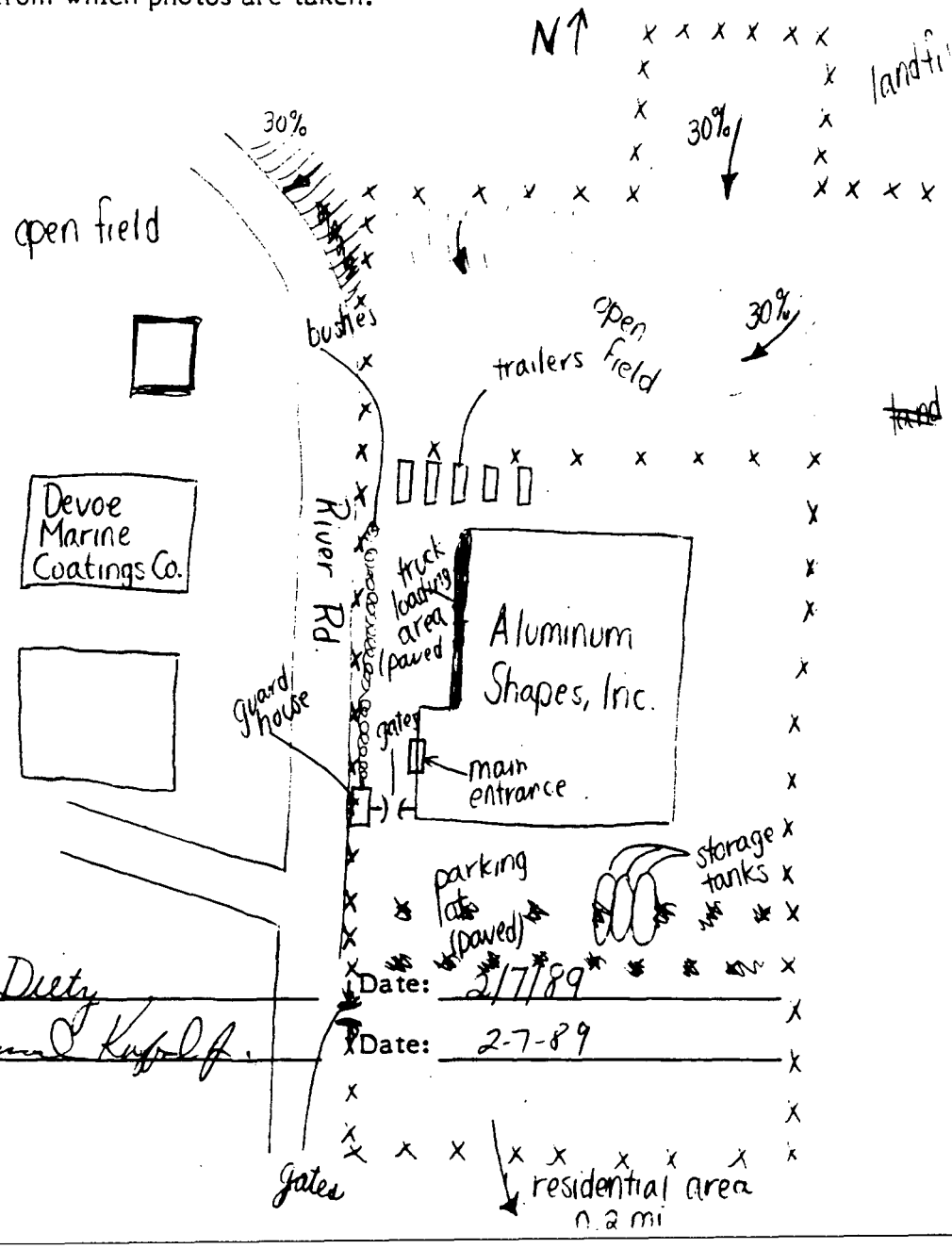
INFORMATION REPORTING FORM

Date: 2/7/89

Site Name: Aluminum Shapes, Inc. TDD: 02-8901-16

Site Sketch:

Indicate relative landmark locations (streets, buildings, streams, etc.).
Provide locations from which photos are taken.



Signature: Brian Dietz Date: 2/7/89

Countersigned: E. Cramer & Kuffel Jr. Date: 2-7-89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 2/7/89

Site Name: Aluminum Shapes, Inc. TDD: 02-8901-16

Notes (Cont'd):

1633 Arrived at the site.
Aluminum Shapes, Inc is located on the eastern side of River Rd. in Delan, N.J. The site is surrounded by an industrial/residential area. The site appears to be active: people are walking in and out of the building and there are alot of cars parked on-site. The facility consists of a ~~two~~ single rectangular building that is approximately 1000' x 300' and parking lot areas. The southern portion of this building appears to contain offices, while the northern portion is a warehouse area w/ truck-loading bays along the western face. The majority of the site seems to be paved and the entire property appears to slope to the north. Facility slope may be ± 3-4%. The site property is enclosed by a 7' chain-link fence and site access is controlled by gates and a guardhouse at the southwest corner of the building. The site seems to be bounded on the north and east by some kind of landfill. There is a residential area approximately 0.2 mile south, south east of the site. Left site @ 1715.

Three cigar-shaped storage tanks (approx 8' long) were located in the parking lot. BD 2-8-89

~~Two~~ No indications of former surface impoundments were visible from off site. BD 2-8-89

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Brian Dietz Date: 2/7/89

Countersignature: Edmund J. Kuyf C.O. Date: 2-7-89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 2/7/89

Site Name: Aluminum Shapes, Inc. TDD: 02-8901-16

Photolog:

Frame/Photo Number	Date	Time	Photographer	Description
F BD 1	2/7/89	1700	BD	looking SE @ N side of building
F 2	2/7/89	1702	BD	looking NE @ W side of building
F 3	2/7/89	1703	BD	looking NE @ S side of building

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Brian Duety Date: 2/7/89

Countersignature: Edmund D Kuffel Jr Date: 2-7-89

REFERENCE NO. 24

NUS CORPORATION — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8901-04	2/14/89	3:30 p.m.

DISTRIBUTION:

Campbell Soup Company (Market St.)

BETWEEN:	OF:	PHONE:
John Rattie	Delaware River Basin Commission	(609) 883-9500

AND:

Tammy Marquart (NUS)

DISCUSSION:

Mr. Rattie said the Delaware River is tidal in the Camden area. In the Camden area the river is a large shipping area. The river is used for recreational boating, but no swimming.

For reference, the Ben Franklin Bridge is located at river mile 100.1 and the Cape is 0. He said the only drinking water intake is by ~~Philadelphia~~ City of Philadelphia at Tarsdale - river mile 110.5. Mr. Rattie mentioned the following industrial intakes: Roman Haas at river mile 106.2 (Phila.), Georgia Pacific at river mile 104.3 (NJ), another industrial intake at river mile 97.8 (NJ), Texaco at River mile 94.0 (NJ), PSE&G of Burlington at river mile 117.2 (NJ) and Stepan Chemical Co. at river mile 127.2 (NJ).

Tammy Marquart 2/14/89

ACTION ITEMS:

NUS 087 REVISED 0681

REFERENCE NO. 25

NUS CORPORATION — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-5902-02	FEB. 15, 1989	1412

DISTRIBUTION:

GAF Corp File - COR

BETWEEN:	OF:	PHONE:
Mr. John Rattie	Delaware River Basin Commission	(609) 883-9500

AND:

Thomas Varner (NUS)

DISCUSSION:

I asked Mr. Rattie if there were any agricultural intakes along the Delaware River between river mile 90 and 110. He said that their listing showed none. He said the water in that region is not likely to be used for agriculture because of its quality.

TAV 2/15/89

ACTION ITEMS:

REFERENCE NO. 26

Let's protect our earth

Central File

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
Trenton, N.J. 08625-0029

George G. McCann, P.E.
Director

John F. Collins
Aluminum Shapes-Smelters
9000 River Road
Delair, NJ 08110

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

NOTICE OF VIOLATION

Dear Mr. Collins:

SEP 27 1988

Re: Violations of NJPDES/SIU Permit NJ0034576

Your NJPDES-SIU Permit was issued on September 24, 1986 and includes certain limitations and conditions for your discharge(s) to sanitary or combined sewers. The discharge monitoring report(s) required by your permit indicate violations of permit limitations. These violations are as follows:

PARAMETER	PERMIT LIMITATION	REPORTED VIOLATION	DATE
pH (SU)	7.0 min.	5.7 min.	7/31/87
Chromium, Total, ug/l	184 avg/448 max	225 avg./1730 max.	
Flow (MGD)	0.3 max.	0.418 max.	
COD, mg/l	400 max.	489 max.	10/31/87
TSS, mg/l	300 max.	440 max.	
Chromium, Total, ug/l	184 avg/448 max	515.56 avg/2120 max	
Aluminum, Total, ug/l	10000 max.	138300 avg/520000 max	
COD, mg/l	400 max.	458 max.	1/31/88
Aluminium, Total, ug/l	10000 max.	24890 avg/92500 max	
Oil & Grease, mg/l	100 max.	203.2 max.	
pH (SU)	9.5 max.	10.1 max.	

Your permit also contains a requirement that a written explanation of reasons for such violations be submitted with the discharge monitoring report, and that this explanation must contain a description of the steps being taken to prevent recurrence of the violation.

Please submit this information within 30 days of receipt of this letter, to the following address:

Wastewater Facilities Management Element
Division of Water Resources
CN - 029
Trenton, NJ 08625
ATTENTION: SIU Permits Unit
Bureau of Industrial Discharge Permits

These violations will be referred to the Enforcement Element of the Division for an appropriate action requiring compliance with the applicable regulations, pretreatment standards and other permit requirements. Failure to respond to this letter may result in additional action by our Enforcement Element. Submission of the requested information, however, does not relieve the permittee from any liabilities resulting from the violations cited herein, or resulting from any other violation of State or Federal Statutes and Regulations to which they may be subject.

Please contact Mr. Gary Torres at (609) 292-4860 if you have questions regarding reporting requirements.

Sincerely,

Muhammad N. Shaikh

Muhammad N. Shaikh, Chief
SIU Permits Unit
Bureau of Industrial Discharge Permits

WQM181:gjt

c: Edward H. Post, Southern Region Enforcement
Mary Jo Aiello, Industrial Pretreatment Section
Nat Cooperman, Bureau of Information Systems

REFERENCE NO. 27

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
SOUTHERN BUREAU OF REGIONAL ENFORCEMENT
20 EAST CLEMENTON ROAD
THE PAINT WORKS
GIBBSBORO, NEW JERSEY 08026

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

Aluminum Shapes, Inc.
9000 River Road
Post Office Box 397
Delair, New Jersey 08110

MAR 07 1988

RE: Compliance Evaluation Inspection
Aluminum Shapes, Inc - SIU/DGW/IWMF
NJPDES No. NJ0053953
Munic/County: Pennsauken/Camden

Dear Sir:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on December 22, 1987 and January 12, 1988. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiency(ies):

1. Discharge 001: TSS, Total Chrome, Aluminum, Zinc, pH and TTO's (Napthalene) exceeded permit limits as per Part III-L, page 2 of the permit for the monitoring period June thru August 1987.

2. Discharge SO1: Total Chrome, Oil and Grease and Base Neutrals (bis-(2-ethylhexyl) phthalate and butyl benzyl phthalate) exceeded permit limits as per Part III-DGW-J,W, page 1 & 2 for the monitoring period July thru October 1987.

3. The following ground water monitoring wells exceeded the permit limits as per Part III-DGW-J, W, pages 1 & 2 for the monitoring period July thru October 1987.

PARAMETER	WELL NUMBERS
Base Neutral	3-65
Manganese	1-55, 2-55, 3-65, 4-60, 5-60, 6-55
Oil and Grease	2-55, 5-60, 6-55
Total Volatile Organics	1-55, 6-55

4. The reported minimum detection limits for the following exceeded the required permit limits as per Part III-DGW-J, W, pages 1 & 2 of the NJPDES Permit for the monitoring period July thru October 1987.

PARAMETER	PERMIT LIMIT	DETECTION LIMIT
Base Neutrals	10 ppb	50 ppb
PCB's	0.001 ppb	5 ppb
Total Volatile Organics	10 ppb	100 ppb

5. The monitoring Report - Transmittal Sheets did not contain any explanations for the operating exceptions cited above in items 1 thru 4.

6. The well numbers, identification numbers, elevation of the top of the well casing above ground level, and the longitude and latitude of the monitoring wells must be permanently affixed on the wells' casings as per General Conditions for all NJPDES discharge permits.

NOTE: The permittee is required to submit only one type of monitoring report - Wastewater Reports (T-VWX-011, T-VWX-013A) or the preferred NJPDES Discharge Monitoring Report (EPA Form 3320-1).

Since the deficiency(ies) cited are presently, or could, in the future, adversely affect effluent quality, you are DIRECTED to institute measures to correct the deficiency(ies). A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within fifteen (15) calendar days of the date of this correspondence.

A reply to the deficiencies noted in discharge S01, are not required at this time, since a request for a permit modification has been requested. However, the facility is still required to meet the permit limits until a decision is made on the permit modification request.

Both the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.) provide for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Lewis Klaudi, the Environmental Specialist Trainee responsible for this case, who can be reached at (609) 346-8032 or by letter through this Division.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department and/or the U.S. Environmental Protection Agency. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Very truly yours,

John M. Tomasiello

John M. Tomasiello, Supervisor
Compliance Monitoring Unit
Southern Bureau of
Regional Enforcement

396362:LGK:leh
Enclosure
cc: Dr. Richard Baker, USEPA Region II
Paul Molinari, USEPA Region II
Camden County Health Officer
Rocco J. Maiellano, Licensed Operator
bcc: John Tomasiello
Region File/Ricciardi/Pagano
Lewis Klaudi
Division File
Robert Candido, Criminal Justice
Nick Sodano
Debbie Latronica
Mary Jo Aiello, BIWM

REFERENCE NO. 28

SURFACE WATER QUALITY STANDARDS

N.J.A.C. 7:9-4.1 et seq.

May 1985

New Jersey Department of Environmental Protection/Division of Water Resources

(c) In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Primary and secondary contact recreation;

3. Industrial and agricultural water supply;

4. Public potable water supply after such treatment as required by law or regulation; and

5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

2. Maintenance, migration and propagation of the natural and established biota;

3. Primary and secondary contact recreation; and

4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Migration of diadromous fish;

3. Maintenance of wildlife;

4. Secondary contact recreation; and

5. Any other reasonable uses.

(f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;

2. Maintenance and migration of fish populations;

3. Migration of diadromous fish;

4. Maintenance of wildlife; and

5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

2. Primary and secondary contact recreation;

3. Maintenance, migration and propagation of the natural and established biota; and

4. Any other reasonable uses.

7:9-4.13 Designated uses of mainstem Delaware River and Delaware Bay (Summarized From the DRBC "Administrative Manual; Part III; Basin Regulations; Water Quality; Including Amendments Through June 29, 1983")

(a) The designated uses for Zone 1C, 1D, and 1E are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident gamefish and other aquatic biota;

4. Spawning and nursery habitat for anadromous fish;

5. Passage of anadromous fish;

6. Primary and secondary contact recreation.

(b) The designated uses for Zone 2 are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident gamefish and other aquatic biota;

4. Passage of anadromous fish;

5. Primary contact recreation from R.M. 133.4 to R.M. 117.81;

6. Secondary contact recreation from R.M. 133.4 to R.M. 108.4; and

7. Navigation.

(c) The designated uses for Zone 3 are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance of resident fish and other aquatic biota;

4. Migration of anadromous fish;

5. Secondary contact recreation; and

6. Navigation.

(d) The designated uses for Zone 4 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Maintenance of resident fish and other aquatic biota;

4. Migration of anadromous fish;

5. Secondary contact recreation; and

6. Navigation.

(e) The designated uses for Zone 5 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Migration of anadromous fish;

4. Maintenance of resident fish and other aquatic biota;

5. Propagation of resident fish from R.M. 70.0 to R.M. 48.2;

6. Secondary contact recreation;

7. Primary contact recreation from R.M. 59.5 to R.M. 48.2; and

8. Navigation.

(f) The designated uses for Zone 6 are:

1. Industrial water supply after reasonable treatment;

Surface Water Classifications

Surface Water Quality Standards N.J.A.C. 7:9-4

Index B-

Surface Water Classifications of the Atlantic Coastal Basin

May 1985

State of New Jersey Department of Environmental Protection/Division of Water Resources

(Allamuchy) - All tributaries to the Pond and to its outlet stream that are located entirely with the boundaries of Allamuchy State Park	FW1
DELAWANNA CREEK (Delaware) - Entire length	FW2-TM
DELAWARE RIVER	
MAIN STEM (Interstate Waters - Classifications from Delaware River Basin Commission (DRBC))	
(State Line) - That portion of DRBC's Zone 1C from the New York-New Jersey state line to the proposed axis of the Tocks Island Dam at River Mile 217.0	Zone 1C
(Tocks Island) - Proposed axis of Tocks Island Dam at River Mile 217.0 to the mouth of the Lehigh River at Easton, Pennsylvania, at River Mile 183.66	Zone 1D
(Easton, Pa.) - Mouth of the Lehigh River at River Mile 183.66, to the head of tide at the Trenton-Morrisville Toll Bridge, Trenton at River Mile 133.4	Zone 1E
(Trenton) - Head of tide at the Trenton-Morrisville Bridge, Trenton, River Mile 133.4 to below the mouth of Pennypack Creek, Pennsylvania at River Mile 108.4	Zone 2
(Philadelphia) - River Mile 108.4 to below the mouth of Big Timber Creek, New Jersey, at River Mile 95.0	Zone 3
(Gloucester) - River Mile 95.0 to the Pennsylvania-Delaware state line at River Mile 78.8	Zone 4
(Marcus Hook) - Pennsylvania-Delaware state line at River Mile 78.8 to Liston Pt., Delaware at River Mile 48.2	Zone 5
(Liston Point) - Delaware Bay from Liston Point, Delaware at River Mile 48.2 to River Mile 0.0 at the intersection of the centerline of the navigation channel and a line between Cape May Light and the tip of Cape Henlopen, Delaware	Zone 6 (C1)
TRIBUTARIES, DELAWARE RIVER	
(Holland) - Entire length	FW2-TP(C1)
(Port Jervis) - Unnamed or unlisted direct tributaries that are north of Big Timber Creek, are outside of the Pinelands Protection and Preservation Areas, and are not mapped as C1 waters by the Department	FW2-NT
(Titusville) - Unnamed tributaries through Washington Crossing State Park	FW2-NT(C1)
(Brooklawn) - Unnamed or unlisted direct tributaries, south of Big Timber Creek and north of Oldman's	FW2-NT/SE2

OLDMANS CREEK	
(Lincoln) - Entire length, except portion described below	FW2-NT/SE1
(Harrisonville) - Portion within Harrisonville Lake Wildlife Management Area	FW2-NT(C1)
ORANDAKEN CREEK	
(Fortescue) - Source to boundary of Egg Island Berrytown Wildlife Management Area	FW2-NT/SE1
(Egg Island) - Creek and tributaries within the boundaries of the Egg Island Berrytown Wildlife Management Area	FW2-NT/SE1(C1)
PATTYS FORK - See MAD HORSE CREEK	
PARGEY CREEK	
(Gibbstown) - Entire length, except segment described below	FW2-NT/SE2
(Logans Pond) - Segment within the boundaries of Logans Pond Wildlife Management Area	FW2-NT/SE2(C1)
PARKER BROOK (Montague) - Entire length	FW2-TP(C1)
PARVIN LAKE (Parvin State Park)	FW2-NT(C1)
PAULINA CREEK (Paulina) - Entire length	FW2-TM
PAULINS KILL	
EAST BRANCH	
(Andover) - Source to Limecrest quarry	FW2-NT(C1)
(Lafayette) - Limecrest quarry to confluence with Paulins Kill, West Branch, except tributary described below	FW2-TP(C1)
TRIBUTARY EAST BRANCH	
(Sussex Mills) - Entire length of tributary to the East Branch at Sussex Mills	FW2-NT(C1)
WEST BRANCH	
(Newton) - Entire length	FW2-NT
MAIN STEM	
(Blairstown) - Confluence of East and West branches to Rt. 15 bridge (bench mark 507)	FW2-TM
(Hampton) - Rt. 15 bridge to Paulins Kill Lake dam	FW2-NT
(Paulins Kill Lake) - Paulins Kill Lake dam to Delaware River, except tributaries described separately below	FW2-TM
TRIBUTARIES, MAIN STEM	
(Emmons Station) - Entire length	FW2-TP(C1)
(Stillwater Station) - Entire length	FW2-TP(C1)
PENNSAUKEN CREEK (Cinnaminson) - Entire length	FW2-NT
PEQUEST RIVER	
(Belvidere) - Source to Tranquility bridge except segments described below	FW2-TM
(Whittingham) - Northwesterly tributaries which are located within the boundaries of the Whittingham Tract from their	FW1 [tm]

REFERENCE NO. 28

BCM Engineers
Engineers, Planners, Scientists and Laboratory Services

302 Evesham Commons • Route 73 and Evesham Road • Marlton, NJ 08053 • (609) 596-6600

1-5-88

December 27, 1988

Mr. Lewis Klaudi, Environmental Specialist
Compliance Monitoring Unit
Southern Bureau of Regional Enforcement
Division of Water Resources
New Jersey Department of Environmental Protection
20 East Clementon Road
The Paint Works
Gibbsboro, NJ 08026

Reference: Proposed Treatability Study
Aluminum Shapes, Inc.
NJPDES Permit No.: NJ0053953

Dear Mr. Klaudi:

As identified in the wastewater treatment work plan for aluminum shapes (last revised October 28, 1988) a treatability study was to be developed to identify and screen potential wastewater management alternatives to bring discharge DSN 001 into compliance with discharge limitations. This letter will define the treatability study and tests to be performed.

1.0 CURRENT PLANT OPERATIONS

As an initial step, historical testing data and current plant operations were reviewed. Figure 1, shows the current wastewater flow schematic and treatment, as well as approximate wastewater quantities. There are three (3) general sources of wastewater contributing flow to discharge DSN 001.

1. Sanitary wastewater from employees
(800 employees, approximately 30,000 gpd)

2. Pretreated wastewater from prepaint processing line No. 5
(approximately 8,000 gpd)

3. Bleed off/Blowdown from water recycling system
(Approximately 62,000 gpd)

2.0 SOURCE CONFIRMATION SAMPLING

Monitoring has been performed primarily on DSN 001 at sampling point No. 1 (SP-1) of combined discharge to the sanitary sewer system. This represents a combined sampling point from all three waste streams.

In order to identify the potential source and characteristics of the contributing waste stream, samples will be collected at four points:

1. SP-1 combined discharge
2. SP-2 pre-treated wastewater from the prepaint line
3. SP-3 bleed off/blowdown from water recycling system.
4. SP-4 sanitary waste and caustic bath discharge.

An initial testing of these four (4) points for the parameters of concern: aluminum, chromium (total), zinc, pH, total suspended solids, and total toxic organics (TTO) is proposed. Composite samples collected on three (3) different days of the week are proposed for this initial screening.

2.1 Total Suspended Solids, TTO's and pH

Three (3) of these parameters, total suspended solids, TTO's and pH, which were identified in evaluation reports by NJDEP, are parameters which do not exceed discharge limits on a routine basis. A review of sampling analyses for the last two (2) years found that these parameters were exceeded infrequently (3 times less over the last 24 months). If these parameters are confirmed to be within discharge limitations during the source confirmation, they will be eliminated from further analysis under the treatability study.

There would, however, be a recommendation to review operating and spill procedure for these low frequency contaminants with plant personnel to reinforce proper disposal and spill procedures.

2.2 Aluminum, Chromiums (Total), and Zinc

A review of the available sampling and monitoring data has shown fairly frequent occurrence of concentrations of these metals above discharge limitations. The proposed confirmation is intended to identify source of the metals, concentration, and form (settleable, suspended, or dissolved). If a metal(s) is identified as being above its discharge limitation in a particular waste stream (SP-2, SP-3) then treatability studies will be performed to determine the best method of correcting this problem.

If metals are not found in a particular process waste stream, then they will be eliminated from subsequent treatability studies.

3.0 TREATABILITY STUDY

The metals chromium and zinc can be removed by precipitation and subsequent solids removal. Chromium is normally reduced from hexavalent to the less soluble trivalent form, prior to precipitation and settling. A review of the past sampling and monitoring data reveals that there is very little chromium present in the hexavalent form which indicates that the problem is not in the reduction step, but in the precipitation and solids removal steps. Problems with high zinc concentration would also indicate less than optimum conditions for precipitation and settling of this metal as well. The sources and form of aluminum (suspended or dissolved) would first need to be identified. Aluminum and aluminum oxides are relatively insoluble in water, therefore, improved settling and solids removal techniques would be evaluated. However, aluminum can be present in other compounds which are soluble in water. In that case, treatability studies to evaluate precipitation and settling of this compound would be conducted.

Laboratory tests to determine optimum chemical dosage and conditions for chromium, zinc, and aluminum removal would be conducted for the identified process waste streams. A series of jar tests would be performed to optimize conditions for removing these metals including amounts of chemicals (caustic and lime), flocculant aids (polymers), pH level, and settling time. Tests for all three parameters would be conducted at the same time. If discharge limits could not be met by settling alone, then laboratory analysis would be performed to assess size of precipitate or particles and evaluation of filtering techniques and the required filter media size.

4.0 SUMMARY AND RECOMMENDATION

The results of the source testing and treatability study will be summarized in a report.

Based upon the results of the testing and treatability studies, wastewater treatment techniques and preliminary design parameters will be presented.

If you have any questions regarding the proposed treatability study, please contact me at BCM's Marlton office. Unless you indicate otherwise, BCM Engineers will proceed with this study as outlined for Aluminum Shapes.

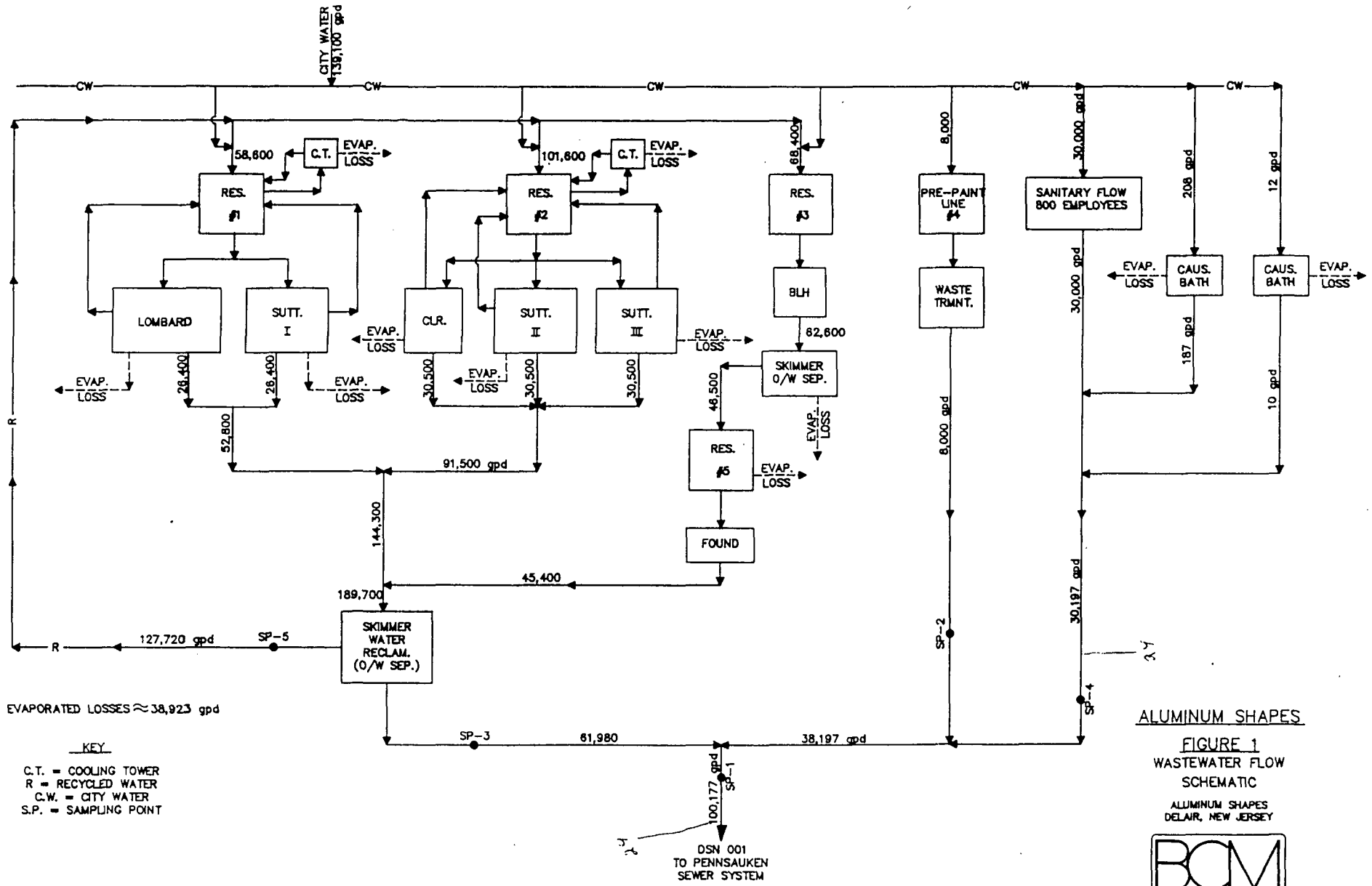
Sincerely yours,

BCM ENGINEERS, INC.

Edward J. DiMond

Edward J. DiMond, P.E.
Assistant Vice President

EJD/mg
cc: 00-5007-07



EVAPORATED LOSSES ≈ 38,923 gpd

KEY

C.T. = COOLING TOWER
R = RECYCLED WATER
C.W. = CITY WATER
S.P. = SAMPLING POINT

ALUMINUM SHAPES

FIGURE 1
WASTEWATER FLOW SCHEMATIC

ALUMINUM SHAPES
DELAIR, NEW JERSEY

BCM ENGINEERS